

R E P O R T R E S U M E S

ED 015 558

EA 001 187

REPORT ON COOPERATIVE RESEARCH TO IMPROVE THE NATION'S  
SCHOOLS, FISCAL YEAR 1966.

BY- HOWE, HAROLD, II  
OFFICE OF EDUCATION (DHEW), WASHINGTON, D.C.

PUB DATE 15 JUN 67

EDRS PRICE MF-\$0.75 HC-\$5.32 131P.

DESCRIPTORS- \*EDUCATIONAL RESEARCH, \*INFORMATION  
DISSEMINATION, \*TRAINING, FEDERAL LEGISLATION, EDUCATIONAL  
PLANNING, \*EDUCATIONAL PROGRAMS, \*RESEARCH PROJECTS, FEDERAL  
AID, RESEARCH AND DEVELOPMENT CENTERS, LABORATORIES,  
FACILITIES, INFORMATION CENTERS, EDUCATIONAL PRACTICE,  
CURRICULUM DEVELOPMENT, ADULT EDUCATION, ELEMENTARY  
EDUCATION, SECONDARY EDUCATION, HIGHER EDUCATION, DISTRICT OF  
COLUMBIA.

EDUCATIONAL RESEARCH, INFORMATION DISSEMINATING  
ACTIVITIES, AND TRAINING IN RESEARCH ADMINISTERED BY THE  
OFFICE OF EDUCATION'S BUREAU OF RESEARCH IN ACCORDANCE WITH  
THE REQUIREMENTS OF TITLE IV, SECTION 2(D), OF PUBLIC LAW  
89-10 ARE DESCRIBED. THE COOPERATIVE RESEARCH ACT, PASSED IN  
1954 (AMENDED IN 1966), BECAME OPERATIONAL IN FISCAL YEAR  
1957 WITH A FUNDING OF \$1.02 MILLION. IT WAS BASED ON THE  
CONVICTION THAT FEDERAL SUPPORT SHOULD BE DIRECTED TO  
PROBLEMS WHICH REQUIRE RESOURCES BEYOND THE MEANS OF STATE  
AND LOCAL AGENCIES. THIS REPORT DESCRIBES THE FIRST YEAR'S  
PROGRESS TOWARD TRANSLATING THE AMENDED AUTHORIZATIONS INTO  
ACTIVE EDUCATIONAL RESEARCH PROJECTS AND PROGRAMS AIMED AT  
FINDING SOLUTIONS TO SOME OF THE GREATEST PROBLEMS FACING  
EDUCATORS TODAY. IT ALSO OUTLINES CONTINUOUS EVALUATION OF  
BUREAU ADMINISTRATIVE PROCEDURES TO HELP GUARANTEE THAT  
COOPERATIVE RESEARCH FUNDS ARE INVESTED IN THE MOST  
PRODUCTIVE ACTIVITIES. FUNDS WERE USED FOR FOUR KINDS OF  
PROGRAMS IN FISCAL YEAR 1966--(1) RESEARCH AND DEVELOPMENT  
CENTERS, (2) EDUCATIONAL LABORATORIES, (3) EDUCATIONAL  
RESEARCH INFORMATION CENTER SYSTEMS, AND (4) PROGRAMS FOR  
TRAINING EDUCATIONAL RESEARCHERS. FUNDS WERE ALSO USED FOR  
PROJECT RESEARCH AND RELATED ACTIVITIES IN (1) BASIC AND  
APPLIED RESEARCH AND CURRICULAR IMPROVEMENT IN ELEMENTARY,  
SECONDARY, AND HIGHER EDUCATION, (2) ARTS AND HUMANITIES  
RESEARCH, (3) RESEARCH IN ADULT AND CONTINUING EDUCATION, AND  
(4) INFORMATION UTILIZATION RESEARCH ACTIVITIES. APPENDICES  
INCLUDE FISCAL YEAR 1966 INFORMATION ON (1) THE NINE RESEARCH  
AND DEVELOPMENT CENTERS RECEIVING COOPERATIVE RESEARCH  
SUPPORT, (2) THE 19 EDUCATIONAL LABORATORIES ESTABLISHED,  
THEIR HEADQUARTERS, AND THE STATES THEY SERVE, (3) THE  
COOPERATIVE RESEARCH OBLIGATIONS FOR PROJECTS AND PROGRAMS  
SUPPORT BY STATE, AND (4) A LIST, BY STATE, INSTITUTION, AND  
AMOUNT OF OBLIGATION, OF COOPERATIVE RESEARCH ACTIVITIES  
SUPPORTED. (HW)

ED015558

Please expedite.

ERIC

report  
on  
cooperative  
research  
to  
improve  
the  
nation's  
schools

FISCAL  
YEAR  
1966

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE  
OFFICE OF EDUCATION

THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE  
PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS  
STATED DO NOT NECESSARILY REPRESENT OFFICIAL OFFICE OF EDUCATION  
POSITION OR POLICY.

**report  
on  
cooperative  
research  
to  
improve  
the  
nation's  
schools**

A summary of fiscal year 1966 educational  
research projects and programs administered by  
the Office of Education, submitted under  
sec. 2(d) of the Cooperative Research Act.

U.S. DEPARTMENT OF HEALTH,  
EDUCATION, AND WELFARE

John W. Gardner, *Secretary*

OFFICE OF EDUCATION

Harold Howe II, *Commissioner*

BUREAU OF RESEARCH

R. Louis Bright, *Associate Commissioner  
for Research*

**FISCAL  
YEAR  
1966**

**LETTER OF TRANSMITTAL**

**U.S. DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE**  
Office of Education  
Washington, D.C. 20202

June 15, 1967

To the CONGRESS OF THE UNITED STATES:

As Commissioner of Education, I am pleased to submit the annual report of educational research and research-related activities carried out pursuant to the authorizations of the Cooperative Research Act (Public Law 85-531, as amended by title IV of Public Law 89-10 and title I, part D, of Public Law 89-750), for the fiscal year ending June 30, 1966.

This report describes the educational research, surveys, and demonstrations, the information disseminating activities, and the training in research administered by the Office of Education's Bureau of Research. It is transmitted in accordance with the requirements of title IV, section 2(d), of Public Law 89-10.

Respectfully,

Harold Howe II  
U.S. Commissioner of Education

**Page CONTENTS**

---

iii	<b>LETTER OF TRANSMITTAL</b>
1	<b>INTRODUCTION</b>
1	<b>The Research Spectrum</b>
2	<b>Background - The Original Cooperative Research Program</b>
3	<b>The New (Amended) Cooperative Research Program</b>
5	<b>Attention to Planning and Results</b>
5	<b>ACCOMPLISHMENTS OF PROGRAMS AND PROJECTS</b>
6	<b>Programmatic Research Activities</b>
7	<b>Research and Development Centers</b>
8	<b>Educational Laboratories</b>
9	<b>Research Facilities</b>
10	<b>Educational Research Information Center (ERIC)</b>
10	<b>Research Training Programs</b>
12	<b>Project Research Activities</b>
12	<b>Basic and Applied Research</b>
13	Elementary and Secondary Education Basic and Applied Research
15	Higher Education Basic and Applied Research
16	<b>Curriculum Improvement Activities</b>
16	Elementary and Secondary Education Curriculum Improvement
18	Higher Education Curriculum Improvement
20	<b>Other Project Research</b>
21	Arts and Humanities Research Activities
21	Research in Adult and Continuing Education
22	Information Utilization Research Activities
22	Miscellaneous Project Research
22	<b>Efforts To Broaden Research Participation and Use</b>
23	<b>Small Project Program</b>
23	<b>Research Development Grants Program</b>
23	<b>Broadened Participation Through Other Programs</b>
23	<b>LOOKING TOWARD FISCAL YEAR 1967</b>

**APPENDIXES**

- 25 **A. Research and Development Centers Supported by the Cooperative Research Act**
- 26 **B. Educational Laboratories and Participating States**
- 27 **C. Cooperative Research Obligations for Project and Program Support, by State: Fiscal Year 1966**
- 28 **D. Cooperative Research Activities Supported During Fiscal Year 1966, by State, Institution, and Amount of 1966 Obligations**

**TABLES**

- 6 **1. Cooperative Research obligations for educational research and research training, and for educational research facilities: Fiscal year 1966**
- 14 **2. General distribution of Cooperative Research funds for basic and applied research projects in elementary and secondary education: Fiscal year 1966**
- 16 **3. General distribution of Cooperative Research funds for basic and applied research projects in higher education: Fiscal year 1966**
- 18 **4. General distribution of Cooperative Research funds for elementary and secondary education curriculum improvement projects: Fiscal year 1966**
- 20 **5. General distribution of Cooperative Research funds for curriculum improvement projects in higher education: Fiscal year 1966**
- 

**DISCRIMINATION PROHIBITED — Title VI of the Civil Rights Act of 1964 states: "No person in the United States shall, on the ground of race, color, or national origin, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving Federal financial assistance." Therefore, programs administered by the Bureau of Research, like every program or activity receiving financial assistance from the U.S. Department of Health, Education, and Welfare, must be operated in compliance with this law.**

## INTRODUCTION

In education, as in any field, research is the basis for progress. The Cooperative Research Act reflects the awareness of the lawmakers and the public that improving education is a nationwide need and that it is the Federal Government's responsibility to encourage research to meet that need. The Act provides authorization for a partnership by which the Federal Government assists those who can offer American education the insights of research. The increasing demand for the results of Cooperative Research activities show that this arrangement has been producing real benefits for education since the program first received funds in fiscal year 1957.

Following 9 years of experience with Cooperative Research, fiscal year 1966 marked a turning point in Federal assistance for educational improvement through the Cooperative Research partnership. In the previous year, appropriations under the Act were \$15.84 million for "research, surveys, and demonstrations." As a result of amendments by title IV of P.L. 89-10 and title I, part D, of P.L. 89-750, the scope of the original Act was expanded to include specific authorization for dissemination, research training, and educational facilities; and eligibility to participate in research and development projects and programs was extended to new categories of applicants, including private industry. The \$70 million appropriated for Cooperative Research in fiscal year 1966 included \$50 million for research, surveys, demonstrations, and dissemination, and for the training of educational researchers; the remaining \$20 million was part of \$100 million authorized over a 5-year period for construction, acquisition, remodeling, and equipping facilities for educational research and research-related activities. The Office of Education's Bureau of Research has responsibility for administering the amended Act.

This report describes the first year's progress toward translating these amended authorizations into active educational research projects and programs aimed at finding solutions to some of the greatest problems facing educators today. It also

outlines the continuous evolution of administrative procedures within the Bureau of Research which help guarantee that Cooperative Research funds are invested in activities that yield the most productive and significant results. In pursuit of this objective, the Bureau took into account the advice of nongovernment experts in educational research in selecting each activity to be funded. Further advice about overall program goals has been furnished constantly from special advisory groups. Thus major steps have been taken toward broadening the partnership for educational improvement made possible under the amended Cooperative Research Act.

## The Research Spectrum

The term "research," as used in this report, is broadly defined to reflect the intent of the original and amending legislation. The amendments, besides making specific provisions for educational research facilities and for training educational researchers, added "dissemination of information derived from educational research" to the previous authorization for research, surveys, and demonstrations. The term "research," therefore, refers to a broad spectrum of systematic efforts to find ways to improve education and make these findings available to those who must make decisions and take action in local schools.

Viewed in this context, the research and development process encompasses four major kinds of activities:

First, it includes basic studies of the learning process and its setting—studies which increase knowledge of the fundamental chemical, biological, and neurological processes underlying learning; investigations of the effects of various social factors and instructional practices upon learning; studies leading to the development of better theories of learning; and analyses of the relative effectiveness of various administrative arrangements in the educational enterprise.

Second, it includes the development of new practices and materials for use in teaching-learning situations. Most curriculum improvement activities and some of the studies related to educational

technology are in this segment of the research and development process.

Third, closely related to development is demonstration, which examines the feasibility of using the new materials, processes, or organizational arrangements in practical settings. Such demonstrations not only test new ideas but also give educators an opportunity to see potential educational improvements in action. The demonstration segment of the total research process may also include further refining and adapting the new programs and procedures to meet operational needs.

Fourth is the systematic dissemination of information. The basic researcher needs information about studies completed or underway if he is to build on them and avoid unnecessary duplication. The education developer needs to know the latest findings about learning if he is to incorporate them in his work. Educators have to know the latest research and development results if they are to make decisions leading to improvements in teaching-learning situations. Demonstrations and feasibility studies have to be publicized, and information about them made available to researchers, developers, and regular instructional and administrative staffs.

The Cooperative Research Act is broad enough to encompass the entire educational research continuum, from basic studies to dissemination of findings. Because the different parts of this continuum are closely interrelated, the term "research" is used in a relatively general sense throughout this report. However, other terms—such as basic research, development, curriculum improvement, demonstration, and dissemination—are used to refer to particular kinds of research activities.

## **Background - The Original Cooperative Research Program**

The soundness of the rationale for increasing attention to educational research is evident from a brief look at the 10-year history of Federal aid for research activities. Passage of the 1954 Cooperative Research Act by the 83d Congress was based

on the conviction that Federal support should be directed to problems which require resources, both financial and human, beyond the means of State and local educational agencies. This Act, therefore, marked the first time Federal support was authorized to improve education through research and related activities conducted by universities, colleges, and State education agencies. The Act became operational in fiscal year 1957 when \$1.02 million was assigned by Congress for the Cooperative Research Program from the OE appropriation for "Salaries and Expenses."

A year later the Congress included in the National Defense Education Act titles authorizing additional research: title VII on new educational media and title VI on modern foreign languages. These authorizations were followed by other legislation providing support for educational research in certain categorical areas. However, Cooperative Research continues to be the largest and most flexible of the Federal authorizations for educational research and related activities and, as such, provides the major Federal key to systematic educational advancement based on research and development.

Initial efforts under the Cooperative Research Act were concentrated primarily on the area of mental retardation. Gradually, as the aggregate of research programs expanded, Cooperative Research funds were administered on a nonpriority basis and technical excellence became the major criterion for approval of proposals.

Over the years, substantial amounts of applied research as well as basic research have been stimulated and supported. More recently the Cooperative Research Program moved into two new kinds of activities—namely, curriculum improvement and the establishment of the first research and development centers, which give continuous, programmatic attention to educational improvements in defined problem areas.

In 1965 several groups—including Office of Education staff, a Presidential Task Force, and others—took a critical look at the federally supported educational research effort, then nearly 9



years old. The wisdom of earlier strategies was confirmed. They had been successful in stimulating the growth of an interest in research and development—in part because in the early days there were enough funds to support nearly all the high-quality proposals received, and in part because unsolicited research proposals could be submitted on any subject pertinent to educational improvement. The field was growing and as time passed the number of submitted proposals increased rapidly (in fact, at a faster rate than appropriations); the educational community as a whole was responding to the larger possibilities of research.

The newly acquired visibility of educational research and development, however, led the office and its nongovernment advisers to examine some apparent deficiencies in the total research effort. First it became clear that the separate research projects, while of acceptable quality individually, did not always fit together well enough to provide a coordinated overall approach to educational problems. The new Research and Development Centers had begun concerted thrusts into several major problem areas, but there was still a need to coordinate different kinds of projects so that research findings could quickly be developed into cumulative results, ready for dissemination.

Second, part of the difficulty in developing highly coordinated research efforts could be attributed to inadequate dissemination of research findings. (Dissemination had not been specifically authorized in the original Cooperative Research Act.) A strong need was felt for an effective system by which the educational research community could have access to information about the results of completed research and the nature of current research.

Third, a careful examination of research results and their relationship to school needs revealed that, in two senses, insufficient attention was being paid to the gap between research and implementation. On the one hand, development was not being supported to the degree that it should; and on the other, too little attention was being directed to the processes by which educational improvements could be implemented widely.

Fourth, it was clear that the human resources available for research and development activities should be expanded in at least two ways. Training programs to develop new research talent would be required, and agencies and institutions previously not eligible for support should be utilized.

The response to these needs was expressed in amendments to the Cooperative Research legislation, and in the subsequent creation of a series of new program efforts under the newly acquired authority. These amendments substantially extended the range of activities possible under the Cooperative Research Act and allowed the Office—through its Bureau of Research—to meet directly some of the needs identified in the reviews of the research program to that time. Furthermore, the legislative history made it clear that the broadened authority was to be used to bridge the gap between research and practice, and to give substantially more attention to the problems of implementing the knowledge derived from the research efforts to date and in the future.

## **The New (Amended) Cooperative Research Program**

The broadened responsibility of the amended Cooperative Research Act created new challenges at the same time that it offered new tools and funds for overcoming shortcomings of past research efforts. As a result of these amendments, three major programs underwent intensive development in fiscal year 1966: the Research Training Program, the Educational Laboratories, and the Educational Research Information Center system.

The new programs represent more than the formal fulfillment of the authorizations of the expanded research legislation. They represent important components in a nationwide surge toward educational improvement, a movement characterized by increased local concern and increased Federal assistance, particularly through the Elementary and Secondary Education Act of 1965. Such a movement makes implicit demands for coordination between research-development-dissemination

efforts and the needs and resources of local schools. The research and development process produces a basis for improvement. It yields knowledge about teaching and learning; it develops new practices, materials, and processes; it tests and demonstrates their feasibility; and it systematically disseminates research information so the local decisions about educational change may be based upon the latest and most objective evidence. But educational improvement requires another step beyond dissemination; it requires that beneficial change actually take place in the schools, that the results of research and development be smoothly implemented.

The introduction of educational innovations throughout a school system often depends more on the dynamics of social change than on the research and development process itself. Certain dynamics—the administration or the politics of change and the local demand for more effective materials and practices in the schools—must be present before research and development in education can be implemented. They constitute, therefore, an absolutely essential element for study by educational research and development strategists.

Against this background the Cooperative Research Program has advanced through the years from mere stimulation and support of educational research, narrowly defined, toward administration of available funds for a systematic and balanced broad research effort to meet the most pressing demands for educational improvement. As the program progressed, management procedures were adjusted to accommodate the Office of Education's responsibility for administering the expanded research authorizations.

For example, in the early years of Cooperative Research, a nongovernment panel known as the Research Advisory Committee evaluated each proposal to determine whether it had the technical qualities needed for sound investment. As the number of proposals increased (in fiscal year 1966, about 3,500 separate proposals were processed, most of them candidates for Cooperative Research support), the function of the Research Advisory Committee (now "Council") shifted. At present,

the 12-member Council, appointed by the Secretary of the U.S. Department of Health, Education, and Welfare, meets regularly to deal with major policy matters and to review and make recommendations on the Bureau's overall plans and accomplishments. Additional advice in particular areas is provided by ad hoc panels of experts drawn from a pool of approximately 200 nongovernment consultants with wide educational competence. A special advisory committee, with continuing responsibility, has been appointed to advise the staff, the Commissioner of Education, and the Research Advisory Council on matters related specifically to the Educational Laboratories.

Nongovernment advisers also have an indispensable role in reviewing individual proposals for funding. Those proposals which show promise of improving education are evaluated both by Office of Education staff and by nonfederal field readers selected from a pool of approximately 900 experts representing every area of education. The number of such reviews depends upon the size and complexity of the individual proposal. Proposals are evaluated for educational significance, soundness of design, adequacy of personnel and facilities, economic efficiency, and other specific criteria as appropriate. Once a proposal has been judged adequate on these grounds, its recommendation for funding depends upon how well it fits the needs of a balanced total program.

To assure coordination among programs of the Office and the field, a special Internal Review Committee—composed of representatives throughout the Office—provides regular review of research program plans and accomplishments as a basis for recommendations and decisions about individual proposals or groups of related proposals. The recommendations of all the above groups—the Research Advisory Council, the consultants, the field readers, and the Internal Review Committee—are reflected in the administration of activities receiving Cooperative Research support.

In short, the Cooperative Research Program has matured considerably. In a decade it has moved from an exploratory effort to a broad spectrum of

educational research activities with a mission to seek objective and substantive evidence for a variety of decisions in education.

## Attention to Planning and Results

During fiscal year 1966 the scope of the expanded Cooperative Research Act led the Bureau of Research to refine its framework of administrative procedures and design a management information system to facilitate day-to-day operation and to assist staff and advisory personnel in planning, monitoring, and evaluating investments in educational research activities.

Since the demand for research results had clearly outstripped the supply of resources (particularly financial), planning had become critically important in allocating available dollars to various research functions and areas of development to meet both short-term and long-term interests. Such planning requires an effective mechanism to insure that all relevant data are canvassed and that maximum flexibility is built into the administrative policies evolving from that planning. During the year the Bureau of Research tried out and refined various procedural mechanisms and determined the initial framework for a management information system. With the approval of advisory groups, some of the available funds were allocated to certain tentatively designated areas.

The demand for research results has also been accompanied by pressure to judge research findings on pragmatic bases, on the grounds that concrete educational improvement is the fundamental reason for supporting research activities. Consequently, 1966 saw a strong and continuing tension between the conduct of research designed to increase basic knowledge about learning processes and the pursuit of applied research and development projects designed to yield specific outcomes for instructional use. The Bureau of Research and its advisory groups agree that both functions should be served with sophistication and energy. Consequently, prudent management of available resources during the year required evaluation of the relation between basic research proposals on

the one hand and projects in development and dissemination on the other—with a view always toward bringing about cumulative improvements in the Nation's schools. At the same time, a significant portion of Bureau funds was made available to assure support for good ideas generated independently.

Effective research planning must inevitably be concerned with the impact which the research results will have on the schools themselves.

Through careful attention to demonstration and dissemination strategies, the Bureau has used some of the available support to help unite the two parts of the change process—i.e., research and development with classroom implementation.

Against this background the 1966 accomplishments of Cooperative Research programs and projects are presented.

---

## ACCOMPLISHMENTS OF PROGRAMS AND PROJECTS

Cooperative Research support follows two general patterns: program support and project support. Program support applies to research activities in specifically announced problem areas in education where the Office of Education observes a need for continuous, intensive attention requiring concentration of professional resources over an extended period of time. Project support applies to a single research activity or set of activities with a few well-defined objectives that can be carried out in a predetermined period. Many different kinds of projects can be supported simultaneously under the latter pattern, thereby providing flexibility to investigate alternatives and to change course as appropriate in order to attack critical problems. Thus project support deals with clearly delineated, limited-time research (of any magnitude), while program support is reserved for certain groups of continuous research or research-related activities. In fiscal year 1966 the total Cooperative Research funds used for project support were slightly more than the total used for program support. Table 1 summarizes these investments.

**Table 1.—Cooperative Research obligations for educational research and research training and for educational research facilities: Fiscal year 1966**

Activity	Number of activities	Obligations (in thousands)
Research and training <sup>1</sup>	929	\$49,546
Programmatic research	211	23,177
Research and Development Centers <sup>2</sup>	10	6,179
Regional Educational Laboratories	19	8,658
Educational Research Information Center Clearinghouses	8	1,063
Research training programs	174	7,277
Project research	718	26,369
Basic and applied research	362	10,037
Elementary and secondary education projects	294	8,278
Higher education projects	68	1,759
Curriculum improvement	218	11,524
Elementary and secondary education projects	140	9,130
Higher education projects	78	2,394
Other project research	138	4,808
Arts and humanities	93	2,400
Adult and continuing education	15	353
Information utilization	13	1,118
Miscellaneous	10	587
Research development grants	7	350
Educational research facilities <sup>3</sup>	14	1,311

<sup>1</sup>Appropriation for fiscal year 1966: \$50 million.

<sup>2</sup>Includes one R&D Center which was phased into a Regional Educational Laboratory during 1966.

<sup>3</sup>Appropriation for fiscal year 1966: the first \$20 million of \$100 million authorized over 5 fiscal years. The unobligated balance for 1966 was carried over to support facilities planned for future years.

## Programmatic Research Activities

Cooperative Research funds were used for four kinds of program activities in fiscal year 1966: Research and Development Centers, Educational Laboratories, the Educational Research Information Center system, and Programs for Training

Educational Researchers. Each of these activities provides a particular thrust in the total research and development effort. Also provided during the year was some support for facilities used for programmatic research.

## Research and Development Centers

At the close of fiscal year 1966 nine research and development centers were being supported by Cooperative Research funds and two others by funds under the Vocational Education Act. Each center conducts continuous in-depth research in a specific problem area (e.g., teaching, administration, learning) that will lead to new concepts and improved practices and materials for use in the classroom. Although the centers work all along the research-development continuum, their primary emphasis is upon the discovery of new knowledge and the development and testing of early phases of new materials and methods.

The Research and Development Center Program concentrates human and financial resources on major educational problems over several years, thus providing a coordinated search for solutions to these problems. Because these problem areas are multifaceted, center staff members can simultaneously carry on clusters of interrelated activities which reinforce one another. The continuous nature of the centers permits the staffs to plan long-range programs and to adjust their activities as research knowledge grows.

The centers are operated at universities which have already shown exceptional competence in bringing interdisciplinary resources to bear on the selected problem area, and can therefore build on established staff and experience.

The first centers were started in fiscal year 1964 at the University of Pittsburgh and the University of Oregon, and have continued to produce significant findings in their areas of investigation. The Pittsburgh center was designed to bring about a fruitful union between instructional practices and learning research. The system of individually prescribed instruction developed there uses continuous tests and other assessments of each student's progress to adjust instruction to his abilities and needs. The Oregon center has been investigating the organization and functioning of educational institutions and their relationships to the communities where they are located.

In the next fiscal year, two additional centers were started, one at Harvard concerned with the effects of individual and cultural differences on the learning process, and one at the University of Wisconsin focusing on basic research in cognitive learning. Among other activities the Wisconsin center is developing and testing a series of exemplary instructional programs in arithmetic.

In fiscal year 1966 six more centers were begun. The one at the University of California at Berkeley is studying the organization, purposes, and outcomes of American higher education. At the University of Georgia center, the effects of early and continuous educational stimulation activities on 3- to 12-year-old children are under investigation. The center at Stanford University is studying the theory and practice of teaching and, complementing this line of inquiry, the University of Texas center is focusing upon teacher education. The center at the University of California (Los Angeles) is investigating better methods for evaluating instructional programs.

A center founded in New York City by eight institutions of higher education and the New York State Department of Education to concentrate on the unique problems of urban education has expanded its organizational structure and focus to become an educational laboratory serving the New York metropolitan area. (Two other centers, supported by funds from the Vocational Education Act of 1963, are concerned with problems in adult and vocational education.)

The kind of research done at the centers results in findings which can be developed and tested in other organizations, such as the rapidly growing educational laboratories which also receive Cooperative Research support. Thus, the centers help begin the cycle of research, development, demonstration, and dissemination which ultimately produces educational improvements ready for use in the schools.

Centers operating with support from the Cooperative Research Act at the end of fiscal year 1966 are shown in appendix A. They received

approximately \$6 million in new and continuation support during that year.

## **Educational Laboratories**

Educational Laboratories were created in accordance with the expanded authority given to the Cooperative Research Program through title IV of the Elementary and Secondary Education Act of 1965, which provides support for regional and national facilities to improve education. The laboratories were designed to help bridge the prevailing gap between educational research and practice by acting as focal points for efforts to improve education throughout the country.<sup>1</sup>

The educational laboratories differ from research and development centers in several significant ways. The centers are generally university-managed, while the laboratories are new institutions, formed as nonprofit corporations, which draw their governing boards from personnel in colleges and universities, State educational agencies, local schools, private industry, and other groups with educational interests. The centers concentrate on producing research knowledge, with some initial development work to convert theory into workable practice. The laboratories, although they may do some research necessary to carry out their major activities, aim primarily to build upon the best existing research knowledge through further development, refinement, testing, and evaluation, until they have produced innovations which are ready for classroom implementation.

The laboratories have also been charged with responsibility for disseminating promising or successful programs and practices. This responsibility involves far more than distribution of information; in fact, one of the most important steps in diffusion of educational improvements is the establishment of demonstrations of the feasibility of new practices. For this purpose the laboratories work with

<sup>1</sup>At the end of fiscal year 1966, educational laboratories covered all the continental United States except the D.C.-Maryland-Virginia area, which was then negotiating a development contract. See list of Regional Educational Laboratories in appendix B.

local schools to display successful innovative programs and techniques in their classrooms. The laboratories may also work closely with State educational agencies and other organizations to hasten the diffusion process once tested innovations are available.

The vigorous nationwide response to the laboratory concept has indicated awareness of the great need for an institution responsible for developing and disseminating educational innovations of quality. At the end of fiscal year 1966, 12 laboratories had been in the program planning stage for 4 months, while eight others had just begun to establish their institutional identities and to pinpoint major program emphases. These 20 emerged when local groups throughout the country worked cooperatively to define geographic regions for the laboratories and to form administrative bases for institutional and program planning. Each of these laboratories serves educational interests in a multi-state area. At the end of the fiscal year, 48 State departments of education were participating in the laboratory program.

Although the laboratories concentrated their efforts on their own staffing and organizational needs during fiscal year 1966, the initial 12 also identified the broad program areas in which they would direct their activities. These areas were selected on the basis of their promise for meeting critical educational needs, both regional and national. Examples of selected programs follow:

Both the Center for Urban Education (New York) and the Southeast Educational Laboratory (Atlanta) have begun searching for the means to provide quality integrated education and to alleviate educational deprivation. The New York City laboratory has designed a two-pronged program to study the results of socially and culturally integrating students and school staffs, and to strengthen instruction at urban schools in reading, mathematics, scientific thinking, social studies, and art. The Atlanta-based laboratory has developed plans for working with instructional materials and techniques to meet the needs of both inner-city and rural children.

The problems of rural schools and regional isolation have been identified as major areas of interest by the Appalachia, Northwest, and Rocky Mountain laboratories. The Appalachia laboratory (Charleston, W.Va.) focuses on two of the most prevalent problems in its region: adult illiteracy and unemployable youth. The Northwest laboratory (Portland) seeks answers to the problems of isolated small schools, with emphasis on teacher effectiveness and meeting minority group needs. The Rocky Mountain laboratory (Denver) has also identified the problems of rural schools as an area for future program development. The Southwest Cooperative Educational Laboratory (Albuquerque) and the Southwest Educational Development Laboratory (Austin) are developing programs designed to improve education for Mexican-American, Indian, migrant, and Louisiana French-speaking student populations.

Although all laboratories will give some attention to curriculum development, the Upper Midwest, Central Midwestern, Mid-Continent, and Southwest laboratories are devoting major efforts to this area. The Southwest Regional Educational Laboratory (Los Angeles) has already begun rapid implementation of its plans by developing a prototype management system and instructional packages on communications and problem-solving skills.

The relationship between the educational laboratories and the research and development centers has already proved stimulating. For example, the first-year focus of Research for Better Schools, Inc. (Philadelphia) is further development and diffusion of the Individually Prescribed Instruction (IPI) Program worked out by the University of Pittsburgh Center. Under the center's guidance, IPI has been successfully used in science, mathematics, and language classes at the experimental Oakleaf School in Pittsburgh. The laboratory will work closely with the center to expand the Oakleaf experimental curriculum to other subject areas and to evaluate the resulting material at pilot schools in Pennsylvania, Delaware, and New Jersey.

In another example of coordinated effort, the Far West Regional Educational Laboratory plans to

work with the Stanford Research and Development Center to improve teacher education through "micro-teaching"—the teaching of a short lesson to one pupil or a small group to develop the teacher-trainee's competence in that particular aspect of her work. The laboratory expects to develop packages of teacher education materials based on the center's research evidence and theoretical rationale on the use of micro-teaching.

Cooperative Research support of approximately \$8.7 million covered activities related to initial establishment of laboratories and partial-year funding of the 12 which began program development in March 1966.

### Research Facilities

In amending the Cooperative Research Act, title IV of the Elementary and Secondary Education Act of 1965 authorized \$100 million over a 5-year period for constructing and equipping facilities for educational research and related activities, and title I, part D, P.L. 89-750 (Elementary and Secondary Education amendments of 1966) provided for acquisition and remodeling of existing facilities. The research and development centers and the laboratories are to be the early beneficiaries of facilities support. The construction and equipment needs of the laboratories and of the universities which house the research and development centers can best be understood by reference to the size and complexity of their educational research activities, the newness of the laboratories, and the kinds of functions both centers and laboratories are, or will be, conducting. Funds remain available until expended for payments on applications approved before July 1, 1971.

Only \$1.3 million of the amount available was used for construction of and equipment for educational facilities in fiscal year 1966. From this, \$211,300 was used to relieve the heavy space and equipment demands of the existing research and development centers, and to provide some of the specialized needs which their large-scale activities make upon the universities at which they are lodged. The remaining funds were used to renovate facilities for the new laboratories and to purchase equipment

for them, such as data processing machinery, audiovisual media, and demonstration units.

The heavy demand for construction and equipment funds is expected to come in fiscal year 1968 when laboratories become more fully operational. By then, programs will be sufficiently determined to provide a sounder basis for the allocation of funds for major construction.

### **Educational Research Information Center (ERIC)**

The Educational Research Information Center (ERIC), which received approximately \$1 million in Cooperative Research funds in fiscal year 1966, is a comprehensive national information system designed to serve American education by making available reliable, current educational research and research-related materials. The growing volume of educational research and the demand for new practices and techniques in the schools have made it imperative that research findings reach the educational community as quickly as possible. The ERIC system is made up of a network of information clearinghouses or documentation centers located throughout the country and coordinated through Central ERIC in the Office of Education. ERIC's basic objective is to provide information quickly and inexpensively by acquiring, sorting, retrieving, and disseminating significant educational research and research-related documents which might not otherwise be readily accessible to the educational community.

During 1966, Cooperative Research funds were used to establish clearinghouses to collect information in eight specific subject areas: (1) Counseling and Personnel Services, University of Michigan; (2) Education of the Disadvantaged, Yeshiva University; (3) Educational Administration, University of Oregon; (4) Junior Colleges, University of California at Los Angeles; (5) Reading, Indiana University; (6) Science Education, Ohio State University; (7) Rural Education and Small Schools, New Mexico State University; (8) School Personnel, City University of New York. Most of these groups already had well-developed collections of educational materials in

their particular subject areas. Staffs consist of specialists who are responsible for document analysis, selection, and other activities related to ERIC's mission. Through ERIC contracts, they have been expanding their collections and their dissemination functions.

In addition to the establishment of the clearinghouses, two contracts were awarded to support the overall operation of the ERIC system. One established the ERIC Document Reproduction Service to duplicate all documents in both hard copy and microfiche (4" x 6" film cards that contain up to 60 pages of text per card) and to furnish these materials to users. The other contract provides the following services to ERIC: (a) abstracting and indexing all documents within the system, (b) assisting the Office with the development of a *Thesaurus of Educational Terminology*, and (c) acquiring and processing OE-sponsored research reports to be included in the ERIC system. As of July 1, 1966, the collection contained slightly more than 1,700 documents on programs for the educationally disadvantaged. The total ERIC collection was expected to increase to more than 10,000 documents during the ensuing year.

Plans were also underway at the end of fiscal year 1966 to issue a monthly publication, *Research in Education*. (The first issue appeared in November 1966.)

### **Research Training Programs**

The Cooperative Research Act of 1954 (P.L. 83-531), as amended by title IV, Section 2(b) of the

---

<sup>2</sup>Four additional ERIC clearinghouses were founded during fiscal year 1966 through funds from other authorizations. Two of these received support under the provision for Language Development Research and Studies, National Defense Education Act of 1958; one under the Research, Development and Training provision of the Vocational Education Act of 1963; and one under the Research and Demonstration Section of the Act covering education of handicapped children (Mental Retardation Facilities and Community Mental Health Centers Construction Act of 1963).



Elementary and Secondary Education Act of 1965 and P.L. 89-750, authorizes support for training of researchers in the field of education. During fiscal year 1966, 92 institutions received grants totaling more than \$7.3 million to support 174 research training programs; the majority were to begin in the summer or fall of 1966.

The purpose of these research training programs is to encourage, stimulate, and support training in educational research by developing and strengthening training staff at various institutions, by assisting in the development of specialized training programs, and by granting institutional allowances for trainee stipend awards which enable a larger number of persons to pursue careers in educational research and research-related fields. With the rapidly expanding demand for educational improvements, the need is great for well-trained researchers, particularly for those concerned with development and dissemination. The demand for their services is growing in universities and school systems, as well as in educational laboratories and research and development centers. This necessitates improved institutional programs to train them. Universities, colleges, State education agencies, local school systems, other agencies and organizations, or any combination of these may apply for support of training programs.

The six types of programs supported during fiscal year 1966 furnished the following services:

- *Undergraduate Training Programs*, designed to recruit and begin the training of career educational researchers, enrolled approximately 200 trainees at 13 institutions.
- *Graduate Training Programs* were designed to attract outstanding students to the field of educational research and to help graduate schools develop or expand programs relevant to educational research. Arrangements were made during the year to train 760 graduate students at 55 institutions.
- *Postdoctoral Training Programs* involved commitment of funds for 41 trainees at 12 institutions which offered programs to update research competence and acquaint trained researchers in other fields with the techniques involved in educational research.

- *Institute Training Programs* provided short-term intensive training in some aspect of research for 1,225 individuals at 26 institutes. These institutes may focus on any level of research competence.

- *Special Training Projects* involved 435 trainees in 19 seminars, workshops, personnel exchanges, inservice training, and other nondegree educational research programs which did not fit the pattern of the institute program.

- *Program Development Grants* were awarded to 28 institutions to strengthen staff and curriculums for training in educational research.

Although these programs as a whole offered many forms of research training experience, emphasis was placed upon program development and graduate training. The number of institutions offering graduate training programs more than tripled over the preceding year. Many substantive areas were covered, with new programs for training curriculum developers (science, mathematics, linguistics, vocational education), educational sociologists, research program administrators, systems (automatic data processing) personnel, institutional researchers, and others.

Many of the institutes and special training projects were aimed at meeting the pressing need for evaluation of title I and title III (ESEA) projects. In one such activity, National Education Association personnel conducted 3-day regional training clinics for State department of education staff who work with the evaluation research sections of proposals for P.L. 89-10 funds (other than Cooperative Research) submitted by local school districts. Participants in these clinics examined typical research designs that could be used to evaluate the types of programs which school districts were likely to propose, and they planned ways to use State educational research resources to assist local districts. A resource book entitled *A Guide to Evaluation of Title I of the Elementary and Secondary Education Act* was prepared to provide background information and source material in the field of evaluation research.

The States participated in the educational research training program in a number of other ways. The

New York State Department of Education, for example, received \$323,000 for a graduate level educational research training program in which 10 universities participate. The program enables teachers in the State to receive advance training in research, development, and dissemination techniques which they may apply when they return to their own classrooms. A 3-week training course for directors of research from 20 State departments of education was conducted by the University of Georgia.

The funding of research training proposals has been carefully coordinated with other Bureau of Research programs. For example, both the educational laboratories and the research and development centers have received training grants for some of their personnel.

During fiscal year 1966, research training projects were funded in 35 States and the District of Columbia.

### **Project Research Activities**

In fiscal year 1966 approximately \$26 million in Cooperative Research funds was used for project research and related activities. The flexible nature of project support permits research to be carried on simultaneously in many different substantive areas, thus covering a great part of the educational enterprise. The more than 700 Cooperative Research projects that received 1966 funds explored every educational level, and their subjects were as diversified as the questions educators ask. Major areas of interest were school administration, teacher training, individualized instruction, student thinking and learning, curriculum development, and education of disadvantaged, urban, and minority groups. Many projects tried out new demonstration and dissemination strategies as part of their research.

Nearly one-half of the 700 were "Small Projects"—pilot studies and other small-scale research activities, each funded by less than \$10,000 of Federal support. This part of the program attracted new researchers from various geographic areas. However, projects may be of any size of complexi-

ty, from relatively inexpensive yet valuable studies to multimillion dollar investigations with many-sided objectives.

While supported programs—such as the laboratories, centers, and research training—provide major thrusts in relatively few areas, supported projects reach out into many different directions where research is needed. For the most part, Cooperative Research project support was reserved for a wide variety of activities which could not be funded appropriately from other authorizations for research in specific areas.

For the purposes of this report, most Cooperative Research projects have been roughly classified under basic and applied research or curriculum development, at either the elementary and secondary level or the higher education level. Special attention has also been given to research needs in particular areas, such as arts and humanities. Most support has been provided wholly on the basis of quality of proposals and balance in the total research effort, but in some cases added consideration has been given to equitable geographic distribution in order to increase participation in research activities in specific regions.

### **Basic and Applied Research**

A central objective of basic research supported by the Bureau has been to collect valid, systematic data upon which generalizations may be built about how specific aspects of human behavior affect learning. In addition, basic research analyses have defined various environmental factors which are essential for learning. During fiscal year 1966, when approximately \$10 million of Cooperative Research funds was invested in basic and applied research projects, efforts in this area turned more and more to the Nation's urgent social problems and the strains they place upon the educational system, such as the demand for widespread individualized instruction to equalize educational opportunity. Problems resulting from desegregation, the rapid growth of large urban centers, rural migration to the city, and the quickening rate of technological change also received consideration.

### **Elementary and Secondary Education Basic and Applied Research.**

—The Office of Education awarded \$8.3 million in fiscal year 1966 to support almost 300 basic research studies in elementary and secondary education. About \$1.4 million of this was spent to study factors affecting reading, speech, and language arts development. This expenditure is justified by the close alliance between reading ability and excellence in other fields, and by the fact that most individuals function far below their maximum reading capabilities. Researchers at Cornell University were awarded funds to detect literacy problems which hinder the education of children and adults. Their strategy is to organize and encourage—in various universities, laboratories, and State departments of education—research which will reveal how reading skills are acquired. Another project (Colorado State Department of Education) is concerned with teaching of reading in kindergarten and therefore affects reading at subsequent grade levels. About 50,000 Denver pupils will be enrolled in the early reading program from kindergarten through fifth grade.

While some research projects make invaluable contributions to educators' understanding of their pupils, others help them to find better ways to direct the expenditure of available resources. In 1966, almost \$1.5 million was used to support 48 research projects of this sort. This area of research is particularly important since school administrators must face the problem of providing quality education when, in many cases, tax bases are deteriorating.

To give local school administrators data on alternative ways to organize their schools, the Bureau has been supporting studies on the social and economic factors influencing school-community relations, administrative and leadership patterns that affect the operations of the schools, and the formulation of sound fiscal policy. A promising study at Stanford University, for example, began analyzing school expenditures in terms of the demand for quality education, ability to pay, and governmental arrangements for decision-making.

The data will provide a basis for predicting how educational financing might be handled under different social, economic, and political conditions, and the consequences that can be expected from various fiscal arrangements.

Reliable information about teachers' roles and effectiveness can also be of great assistance to the school administrator and to education as a whole. Unlike other beginning professionals, the new teacher may start at the top; from her first day she often has the same responsibilities as the most experienced teacher on the staff. Washington State University researchers made a study (with Cooperative Research support) for the State Board of Education to determine how much reduced teaching loads and intensive inservice training might improve the classroom competency of beginning teachers and their attitudes toward teaching. Studies were funded at the University of Chicago and at Michigan State University to explore the various collective actions taken by teacher organizations across the Nation. While these studies do not describe negotiation procedures, they will identify the issues and patterns of collective bargaining that have arisen during the past few years.

In another vein, a study of "Factors Involved in Determining the Relationship Between Teachers' and Pupils' Attitudes" (University of Texas) concluded that teachers have much greater influence on pupils in schools located in lower-class neighborhoods than on pupils in other schools.

The ultimate beneficiary of attempts to improve education should be, of course, the student himself. Several Cooperative Research projects have attempted to probe little-understood areas of student motivation, creativity, and intelligence. A Rutgers University report has provided evidence that creative children are more willing to take risks than less creative ones and that school emphasis on "success" (as currently defined by the schools) and on pleasing the teacher does not stimulate children's inquisitiveness and originality. To encourage future research in problem solving and creativity, a conference of leading scholars was held in New York City early in the year. Their papers were compiled and published in a book entitled *Learn-*

*ing by Discovery: A Critical Appraisal*, one of the first sourcebooks on the subject.

In the areas of student guidance and counseling, several projects have researched ways to provide better services. A research contract with Northwestern University produced not only information on college choice but also a "College Suggestor," a device that pairs colleges and universities with the interests and requirements of the prospective college student.

Because one of the major objectives of education is to inspire individuals to continue learning after their formal schooling is completed, recent developments in secondary education have emphasized the need to provide each student with opportunities for learning how to learn—on his own. A project at the University of Florida found that only a small number of schools are making appreciable use of independent study and, of these, most of the programs are directed to the above-average student.

Sometimes the most critical influences on learning lie outside the school system. It is a well-known fact that environment surrounding the student has a great effect on learning, but the exact interplay between the school and other social forces still

requires much research. The significance of social pressures on education has been the subject of many Cooperative Research-supported inquiries. In the area of race relations, a study was financed at Harvard University to analyze the effects of Federal and other policies on public attitudes. When completed, this study should yield statistical data which will show Federal and other government units how desegregation can be achieved with minimum negative reaction.

Conversely, what occurs in the schools has a vital effect on crime, employment, and a multitude of influences that shape society. A George Washington University study on the relation of special programs in District of Columbia schools to prediction and prevention of delinquency concluded that, next to the family, the American school system is probably the most important socializing agent, since it transmits the values, habits, and aspirations of society as a whole. The findings describe several factors which contribute to juvenile delinquency and propose means by which the schools can prevent it. Projects of this type illustrate ways in which educational research contributes not only to the schools but also to society at large. Table 2 summarizes Cooperative Research investments in the subject areas illustrated above.

**Table 2.**—General distribution of Cooperative Research funds for basic and applied research projects in elementary and secondary education: Fiscal year 1966

Subject area	Number of projects	Obligations
Reading, speech, and language arts development	52	\$1,420,615
Instructional and counseling methods	26	463,690
Teachers and their training	30	759,740
Student thinking and learning	50	1,324,060
School administration	48	1,468,250
Psychological and environmental factors affecting education	88	2,842,033
<b>TOTAL</b>	<b>294</b>	<b>\$8,278,388</b>

### Higher Education Basic and Applied Research.

—About \$1.8 million in fiscal year 1966 Cooperative Research funds was invested in basic and applied research projects in higher education. The low figure (in comparison with the funds spent on basic and applied research at the elementary-secondary level) may be attributed to (1) the difference in enrollment at the two levels and (2) the stage of research interest in higher education. However, new promise for research in higher education was shown during the year by studies in such areas as student behavior, institutional administration, teacher training, instructional methods, and social and community influences in relation to higher education.

Studies of student behavior have sought the means to ease the transition from high school to campus life and to determine the factors that lead to a healthy college experience. Many of these studies concentrate on what occurs in the classroom—the interaction between teacher and student that creates a sound learning environment. In a study initiated at the University of Michigan, investigators sought clues to the kind of student and teacher relationships which stimulate the desire to learn and generally lead to collegiate success. This study should help develop methods to assess a student's capacity for achievement and also help prescribe effective teaching and counseling suited to his abilities and interests. A project at the University of Texas is analyzing the effectiveness of various methods of teacher preparation. Investigators are collecting data to determine how individual personality patterns and the influences of different kinds of teacher education programs affect subsequent classroom teaching.

The atmosphere outside the classroom may also have a great effect on how smoothly students adjust to college life. Although given little attention in the past by those who explore the psychology of learning, peer group influence seems to make a major contribution to collegiate achievement. In response to this thesis, investigators at the University of Georgia received support to experiment with ways to create a residence hall climate conducive to student adjustment and learning. In

another study of student behavior, researchers at Columbia University have been analyzing plans of students who were graduated from high school in 1965 to discover their reasons for attending college.

With increasing recognition that colleges and universities are an integral part of the communities in which they are located, several projects were funded to probe the relationships between educational institutions and the social milieu around them. Washington University in St. Louis started a case study on the formation of a junior college. It is investigating the means by which the metropolitan power structure, other organizational interests, and demographic and ecological factors supported the movement to form a junior college in the St. Louis area. It also is examining the functional priorities of the college and the leadership and sources of support for its programs.

Another project, this one at Morehouse College, Atlanta, should help ease some of the problems of institutions attended chiefly by Negroes. Through working conferences, personnel who have taken part in cooperative programs at predominantly Negro colleges have been sharing their experiences, discussing their problems, and planning for the future of their institutions. Such conferences also provide factual information on the history, administrative organization, and operational aspects of a variety of existing programs.

Because of the rapid growth of university enrollments, the increase in faculty research commitments, and the new demands by State legislatures, private foundations, and governmental agencies, the requirements for sound university administration have expanded and changed. This has been paralleled by changes in the goals set by individual faculty members, and at times these two have come into conflict. A project entitled "Academic Administrators and University Goals: A Study in Conflict and Cooperation," at the University of Minnesota, attempted to assess the role of university administrators in fulfilling institutional goals. Another project dealing with aspects of university administration (University of Wisconsin) set out to develop

a computerized methodology for determining the space and facilities requirements of a large university. This study should help solve the national problem of effective management of institutional physical facilities to accommodate rising enrollments, expanding curriculums, and changing policies and teaching methods.

Table 3 shows the distribution of Cooperative Research funds for the types of studies described above.

### Curriculum Improvement Activities

Whereas the major purpose of basic and applied research in education is to collect information and build principles for understanding the learning process, curriculum improvement activities create the instructional materials and techniques with which teachers and students work. As used in this section, curriculum improvement is broadly defined to include not only projects concerned with content of instructional materials but also curriculum-related projects concerned with special groups, such as the disadvantaged and the gifted, and with special ways of teaching and learning, such as computer-assisted instruction. Some projects also give attention to the mechanics involved in curriculum development and diffusion.

Cooperative Research support for curriculum improvement activities in fiscal year 1966 amounted to approximately \$11.5 million.

**Elementary and Secondary Education Curriculum Improvement.** —During fiscal year 1966, more than \$9 million in Cooperative Research funds supported curriculum projects in elementary and secondary education. A special effort was made to create curricular materials which were relevant to the needs of different student groups—to their abilities, interests, and backgrounds. This action was based on the consensus that, if a sufficient variety of alternative curriculum packages could be made available, educators might then select materials tailored to the different types of students their schools serve. There was also considerable interest in developing comprehensive, sequential curriculum materials so that course materials for different grades and subject areas would dovetail with those at other levels and with related subjects.

At both the elementary and secondary levels, the tendency was strong for curriculum improvement work to assume a cross-disciplinary, pupil-oriented approach. For example, to supplement the new concept-oriented curriculum in physics (PSSC), support was given to Harvard University to develop a physics curriculum using the case study approach. The project was designed to make physics interesting to a larger number of students by including information about the social and historical settings in which the great discoveries were made. The result promises to be an innova-

**Table 3.**—General distribution of Cooperative Research funds for basic and applied research projects in higher education: Fiscal year 1966

Subject area	Number of projects	Obligations
Student behavior and learning	18	\$435,106
Teacher training and instructional methods	21	681,925
Sociology of higher education	15	215,745
Educational administration	6	162,141
General (other)	8	263,938
<b>TOTAL</b>	<b>68</b>	<b>\$1,758,855</b>

tive, comprehensive physics curriculum, including materials, media, and teacher-preparation instructions. Cooperative Research funds also supported a 1-year study conducted by the National Science Teachers Association which defined the most important characteristics of the scientific method and identified fundamental scientific principles (e.g., evolution, transformation of energy) essential for understanding the physical world. The project also provided suggestions for incorporating these concepts into course materials.

Further cross-disciplinary work was done in a project at Columbia University Teachers College to construct a secondary school curriculum that eliminates the barriers presently separating the several branches of mathematics—arithmetic, algebra, and geometry. This program would also bring more advanced mathematics studies into high school education. Continuation support was given to a 5-year mathematics curriculum project at Webster College, Webster Groves, Mo., where emphasis has been on innovative practices, the discovery method of learning, and inservice teacher education. There is evidence that materials resulting from this project have substantially influenced teaching practices throughout the country as well as the treatment of mathematics in new textbooks.

A far-sighted approach to curriculum development is typified by "Project Social Studies," an attempt to build course material that cuts across broad lines of subject matter and treats it as an organic interrelated whole rather than the quantitative total of its several parts. Although "Project Social Studies" consists of a number of separate curriculum improvement activities, all have in common an emphasis on a multidisciplinary approach to social studies and on teaching "problem solving" skills rather than mere data and details. Some of the projects are incorporating social studies material into "total curriculums" that stretch from kindergarten through high school. Others are concentrating on specific areas where new materials are needed, such as a University of California (Berkeley) project to prepare curriculums on Asian studies and one at the University of Texas on Latin American cultures.

The demand for special curriculums tailored to different groups of students is particularly pressing in the teaching of English language arts, where further education and equality of opportunity depend so much on the learning of this one basic skill. Through a project on teaching English as a second language, the California State Department of Education began developing language arts curricular guides for use with Spanish-speaking Mexican-American children. These new curricular materials will help children in elementary grades minimize the effect their language barrier might have on their adult lives. With a little alteration, the materials can be used for other children whose native language is not English.

In 1966 Cooperative Research funds continued to support 18 English curriculum study centers at colleges, universities, and State departments of education, where curricular materials were being prepared for various aspects of language arts instruction in elementary and secondary schools. Typical of these is the curriculum study center in English at Northwestern University, where staff have been concerned with analyzing the process of composition and developing curricular and supplemental materials based on the results of their analyses.

Two nationally important educational priorities, computer-assisted instruction and education of the disadvantaged, both of which have implications for curriculum improvement, are brought together in one of the most significant Cooperative Research projects, the Stanford program in computer-assisted instruction. Using computers in the actual teaching process, educators have been giving disadvantaged primary graders from the Palo Alto area an opportunity to learn reading and arithmetic through completely individually prescribed instruction. Each computer serves a single child at a given time. The child can learn at his own speed, independent of the rest of the class. Although this method may be particularly useful in teaching the disadvantaged, it also holds great promise for all children served by the American educational system.

Another student group which requires special

educational treatment is the gifted. Appropriate programs for these children are often entirely lacking in the schools. The development of programs for the gifted is the aim of a major curriculum improvement project awarded to the California State Department of Education. This extremely comprehensive project included components relating to enrichment in the regular classroom, summer school acceleration techniques, integration of counseling and instruction, and other special techniques for education of the gifted. Procedures entailed development and dissemination of curricular materials, evaluation, workshops and inservice training for teachers, and establishment of pilot centers in six school districts to concentrate on the gifted.

Table 4 summarizes the Bureau of Research's effort to use available Cooperative Research funds to help support a balanced program of long-range curriculum improvement at the elementary-secondary level.

#### Higher Education Curriculum

**Improvement.** —Efforts to improve curriculums and instruction in higher education during fiscal

year 1966 were focused heavily on improving teacher education and on stimulating strong curriculum proposals in other areas of special concern. More than half a million Cooperative Research dollars were spent on teacher education studies and about a quarter million on conferences, seminars, and other professional meetings which helped develop interest in overcoming higher education curriculum deficiencies and in solving instructional problems. As a result of this stimulation, a number of significant curriculum-related projects were funded in methodology, instructional techniques, student counseling and guidance, and the special problems of the disadvantaged. The total amount of Cooperative Research support used for higher education curriculum improvement in fiscal year 1966 was approximately \$2.4 million.

The major emphasis on better teacher education programs reflects the fact that, despite innovation and technology, the teacher is still the central figure in the classroom and her skills will continue to set the tone of American education for many years to come. At the same time, many have expressed the feeling that teacher education institu-

**Table 4.**—General distribution of Cooperative Research funds for elementary and secondary education curriculum improvement projects: Fiscal year 1966

Subject area	Number of projects	Obligations
Language arts	43	\$1,839,929
Social sciences	27	1,265,673
Mathematics	15	731,174
Science	14	2,811,368
Cross-disciplinary	15	398,243
Disadvantaged children	10	1,010,034
Gifted children	10	916,452
Computer methodology	3	134,909
Physical education, recreation	3	22,469
<b>TOTAL</b>	<b>140</b>	<b>\$9,130,251</b>



tions have been slow to integrate new teaching methods into their curriculums and that, in many ways, they have not been preparing teachers to meet the challenges of today's education. Several Cooperative Research projects have been designed to help teacher education institutions keep pace with the changing needs of our society. In one such project, personnel at Coppin State College (Baltimore) have been developing and testing a teacher education curriculum specifically aimed at preparing teachers for effective work in inner-city schools after graduation.

Using the audio visual approach to upgrade teacher education, a project conducted by the Oregon State System of Higher Education has been developing a series of low-cost films depicting actual problems in teaching and classroom management. Scripts and films will be tested after development is completed. A number of other projects have been formulating and testing innovative materials and then comparing results with other methods. Through such evaluation, the promising innovation can be distinguished from that which is merely new.

In another area of professional education, the University of Southern California has developed a simulated patient to train student anesthesiologists. The simulated man enables medical students to learn the necessary skills for administering drugs and anesthetics without discomfort or danger to live patients. It can, through computer direction, open and close its eyes, open its mouth and extend its tongue, cough, change color, vary pulse rate, blood pressure, and heart action, and otherwise react very much as a live patient. Developmental tests indicate that trainees using the patient-manikin will be able to learn basic skills in a fraction of the time required in nonsimulated training. Projects in other professional areas include one at the University of Miami to develop and evaluate a programmed text in criminal law, and one at the University of Wisconsin to formulate guidelines for experimentation in teaching higher education courses in foods and nutrition.

Other Cooperative Research funds were used to develop higher education curriculums in subject

areas such as language arts and the social sciences. About \$650,000 was provided for language arts development, principally in English literature, grammar, composition, and speech. In one such project, at Michigan State University, investigators sought new ways to help students distinguish between writing for self-expression and writing to convey information. A new teaching format was being developed and tested which emphasizes discussions of different kinds of compositions by the students themselves and close personal supervision of their writing by graduate students. A University of Illinois curriculum study center continued to lead a cooperative, statewide effort of 20 colleges and universities to improve curricular programs for future teachers of secondary school English. Each college evaluates its own needs in preparing English teachers and engages in continuous research and development to improve courses in this field.

A project to examine and improve methods of teaching composition to disadvantaged youth was underway at Macomb County Community College, Warren, Mich., where a first semester freshman English course was turned into a slow-paced two-semester course for special students. Their progress in this course will be compared with that of students in a remedial course and in a one-semester course.

Several social science curriculum improvement projects were supported. They are working not only toward new approaches to traditional subject matter but also toward specialized courses meant to meet the needs of special student groups. For example, a project entitled "The Preparation of American Teachers in the Field of World Affairs," conducted by the American Association of Colleges for Teacher Education, should lead to improvement of curricular offerings on international understanding available for teacher education programs. A project to create a new 2-year course in Western Civilization, by integrating into the present Western-oriented humanities curriculum a large portion of comparable materials from other cultures, was in progress at the University of Miami. In an attempt to reach students who

usually take few social studies courses, investigators at the Massachusetts Institute of Technology undertook the development of a basic social science course for undergraduate students in the natural sciences and engineering. Several other projects concerned refining and adding to present course offerings in history, economics, psychology, political science, and the other social sciences.

Cooperative Research funds supported 16 higher education projects in the related areas of mathematics, science, and engineering curriculums. During 1966, Syracuse University developed an electrical science course for electrical engineering college students, as well as a "learning machine" to use the materials in programmed instruction. A series of readings in biology was prepared and tested at Washington University, St. Louis, where the investigator translated original papers from Latin, Greek, German, or French to help students trace the historical development of science concepts. The readings describe the state of knowledge at a given time, the problems which faced scientists, and the experiments they used to test hypotheses. Morgan State College, Baltimore, received Cooperative Research funds to develop and evaluate a set of materials which require only minimum reading skills to master mathematics manipulation in arithmetic, algebra, geometry, trigonometry, and graphic analysis.

Other projects, many of which cut across regular

subject lines, explored the major contemporary philosophies in curriculum improvement and the practices which they inspire. Such projects generate new ideas which may be applied to all types of learning. Several of these took the form of conferences, where experts in the field met and exchanged ideas about the areas where curriculum improvement work might be most beneficial to higher education. Other related projects have dealt with methodology, and several of these have experimented with applying the latest technology to educational purposes. One such project at the New York Institute of Technology was designed to provide a model for developing courses to be used in individually prescribed instruction. Using computers, project investigators hope to provide the detailed material for a mass training effort where, nevertheless, every student may proceed in his studies at his optimal rate and with a high probability of success.

Table 5 summarizes Cooperative Research expenditures for higher education curriculum improvement projects according to subject area.

### Other Project Research

About \$4.2 million in Cooperative Research funds was used for 128 projects which fall into special areas—such as arts and humanities, adult and continuing education, and information utilization—or which serve special purposes, such

Table 5.—General distribution of Cooperative Research funds for curriculum improvement projects in higher education: Fiscal year 1966

Subject area	Number of projects	Obligations
Teacher education, medicine, and other professional preparation	19	\$787,237
Language arts	19	655,268
Social sciences	9	243,156
Mathematics, science, and engineering	16	214,458
Methodology, cross-disciplinary	15	494,175
<b>TOTAL</b>	<b>78</b>	<b>\$2,394,294</b>

as Research Development Grants (reported in the next section under Efforts to Broaden Research Participation and Use). These projects, and 10 others which do not readily fit into the previously described categories for basic and applied research and curriculum improvement activities, are discussed below.

### **Arts and Humanities Research**

**Activities.** —The Arts and Humanities Program exemplifies how staff leadership and interagency cooperation can focus attention upon research, development, and dissemination needs in an area of great importance to education. Through this program, many concerned with education in the arts and humanities are becoming involved in research activities for the first time. The Cooperative Research Act financed about 80 new projects in music, art, theatre and dance, museums, and humanities during fiscal year 1966, more than double the number supported during the previous year. The ongoing (new and continuation) projects spread from preschool through higher education, representing a total Cooperative Research investment for the year of about \$2.4 million.

A substantial number of these arts and humanities projects were in basic research and curriculum improvement. Also included were 10 conferences where professional leaders discussed research and development needs in various areas of the arts and humanities. At the University of Michigan, Cooperative Research funds supported an international conference on teacher education in music, with participants from Europe, Asia, and Africa, as well as the Western Hemisphere. In keeping with evidence that the arts play a highly significant role in meeting the educational needs of disadvantaged children, the Arts and Humanities Program staff participated in the National Conference on Education of the Disadvantaged, which encouraged research and development in this area.

One significant project sought to blend applied research and curriculum improvement by compiling a comprehensive music curriculum from components of innovative music education programs in 15 schools located throughout the country. Project personnel at Manhattanville College, Purchase,

N. Y., were incorporating the results of these studies into a comprehensive elementary and secondary music education curriculum as the year ended.

A pilot study, with the sponsorship of George Washington University and the cooperation of the National Gallery of Art, began exploring means whereby a museum and a university teacher-training program can most effectively work together to enrich classroom offerings. This project will help establish a rationale for productive new relationships between educational institutions and those institutions outside the school system concerned with the role of the arts in raising educational standards. Due to the rapid growth in the number of museums and related institutions and the need for more information about their educational efforts, a basic survey of all such institutions in the Nation has been initiated with the cooperation of the Smithsonian Institution and the American Association of Museums.

Through its work with other units of the Office of Education, and with other agencies (particularly the National Endowment for the Arts and the National Endowment for the Humanities), the Arts and Humanities Program has helped coordinate Federal efforts in these areas so that projects supported through the Cooperative Research Act complement those funded through other agencies.

### **Research in Adult and Continuing**

**Education.**—In fiscal year 1966 about \$353,000 in Cooperative Research funds was used in activities related to the educational needs of the growing number of persons who take part in continuing education programs. In one such project, investigators at Columbia University analyzed special conditions related to adult participation in education programs. The aspirations of married women college graduates were the subject of a project at Northwestern University. A study of the effects of participation in public affairs adult education programs was conducted by the American Institutes for Research in the Behavioral Sciences, Pittsburgh, Pa.

These studies in continuing education help complement research and related activities which shed

light on the problems and processes of elementary, secondary, and higher education, and thus complete the circle of activities which meet educational research needs. Other adult and continuing education studies were supported by Vocational Education Act funds.

### **Information Utilization Research**

**Activities.** —Research and development projects to foster utilization of educational research findings and to devise effective communication networks among educational organizations accounted for more than \$1 million in fiscal year 1966 Cooperative Research funds. (These funds were in addition to support for dissemination of research findings on educational media under title VII of the National Defense Education Act.) For the most part, the Cooperative Research-supported projects investigated dissemination and diffusion processes, or they applied systems analysis and technology to educational communication problems.

In a typical study of the diffusion of educational innovations, University of Michigan investigators collected data on how organizational relationships and administrative policies in the schools influence the adoption of new classroom teaching practices. Promising efforts to develop better communications systems were being pursued in both Iowa and California, where project personnel are incorporating data processing equipment into statewide educational information retrieval networks. At Syracuse University, Cooperative Research funds were used to establish a model national library for adult and continuing education.

**Miscellaneous Project Research.** —Since the Cooperative Research Act is the only noncategorical research authorization administered by the Office of Education, its funds have been used to round out research efforts on a wide variety of educational subjects and to guarantee experimentation in promising new areas. For example, in the increasingly important area of international education, some projects were funded in fiscal year 1966 to study foreign educational systems and their relevance for American education. Projects which dealt in some way with education of the handicapped accounted for a Cooperative Research

investment of more than \$350,000 in 1966. Many of the projects explored how innovative educational techniques might be applied to special education as well as general education; several others were aimed at developing methods to identify physical and mental handicaps early in childhood. There was also some basic research in the general learning and behavior of handicapped students. Thus, the Cooperative Research Act as Amended has provided manifold opportunities to set emphasis and give direction to the educational research effort. Its authority has been broad enough to sustain a wide assortment of valuable studies. It can encompass research in peripheral subject areas where general education overlaps with fields which have special Federal authorizations for research activities, such as vocational education, education of the handicapped, and library, foreign language, and educational media studies. It can be focused to stimulate research in areas of new interest such as information utilization and the arts and humanities, and to deal with unforeseen educational problems. It offers leeway for the funding of proposals which contain significant original ideas for research and development.

At the same time, because such a wide variety of projects are authorized under Cooperative Research, the competition for available funds is intense. This creates constant pressure for the Office of Education to fund only the most urgently needed studies. To this end, the Office relies heavily upon nongovernment advisers to help determine the most worthwhile investment of funds, both in selecting the areas of emphasis and in judging the promise of individual activities presented in this report.

### **Efforts To Broaden Research Participation and Use**

The flexible nature of the Cooperative Research Program enables the Bureau of Research to encourage broader participation in the research effort, particularly among institutions and areas which have not, in the past, been in the mainstream of educational research. Equitable geographic distribution is one of the goals in this

attempt to encourage widespread research interest.<sup>3</sup>

### **Small Project Program**

Small contracts, designed to provide up to \$10,000 for projects which can be completed within 18 months, have been highly successful in stimulating promising research and pilot studies by individuals who are not affiliated with large research operations. A special category has been set aside for these projects—which may be in any of the general or specialized areas—to ensure that inexpensive yet worthwhile proposals receive adequate consideration.

This program is also intended to encourage personnel of small colleges to gain experience in research and related activities, and to support significant small-scale educational research projects by doctoral and postdoctoral students and fellows, particularly those at developing colleges. During fiscal year 1966 approximately 300 small projects were supported, with participation from nearly every State in the Union.

### **Research Development Grants Program**

Broadened participation in the research effort has also been a primary consideration in awarding Research Development Grants which support the efforts of small or developing colleges to establish educational research programs. Through these grants, small institutions throughout the country may jointly develop research skills, to research their own educational problems, and to make use of promising educational innovations. Use of these grants by teacher training institutions is intended to help teachers and future teachers learn to apply research results in their own classrooms and to use

the research or inquiry approach in their teaching. During fiscal year 1966 Research Development Grants were negotiated with Emory University, Atlanta, and with consortiums of institutions in North Dakota, Oregon, North Carolina, Virginia, Tennessee and Mississippi, and Wisconsin.<sup>4</sup>

### **Broadened Participation Through Other Programs**

Geographic distribution to broaden research participation is also one of the criteria used in allocating grants under the Educational Research Training Program. After the proposals have been assessed to ensure quality, some awards have been made to institutions which need stronger research programs to provide for the needs of their particular regions. Some research training experience is also received through the small projects program, the research and development centers, and the educational laboratories. The laboratories themselves, of course, help to further diffusion of the results of educational research and related activities throughout the country.

## **LOOKING TOWARD FISCAL YEAR 1967**

The Cooperative Research Act is the major Federal authorization for research, development, and dissemination activities focused upon systematic improvement of education. While other authorizations provide support in certain categorical areas, Cooperative Research is faced with the challenge and primary responsibility for uniting and rounding out total research efforts into a well-balanced, productive whole. This continued to be the challenge at the opening of fiscal year 1967.

Moving into the eleventh year of administering support for activities authorized under the Cooperative Research Act, as amended, the Office of Education had plans to strengthen activities already underway, to embark on some new ones in keeping with the needs of the times, and to move certain administrative responsibilities to regional offices in order to encourage broader research participation and bring administrative services closer to new participants. Assistance from the

<sup>3</sup> Distribution of Cooperative Research funds to each State is shown in appendix C.

<sup>4</sup> In the appendixes showing States and institutions which received fiscal year 1966 funds, Research Development Grants are listed only under the institution which served as the contracting agency. For example, although two Mississippi institutions (Mississippi Industrial College and Rusk College, both in Holly Springs) received funds from the Tennessee-Mississippi grant, the listing appears under Tennessee (Lane College, Jackson) in appendixes C and D.

Research Advisory Council and other advisory groups has been an important factor in determining the direction of these plans and the procedure to implement them.

The strengthening of continuing activities is evident in a number of programs as they entered fiscal year 1967. The network of educational laboratories developed in 1966 is moving into full operation, and individual laboratories are sharpening their focus and improving their techniques to help local schools bridge the gap between research and practice. There is also evidence of improved coordination between activities of the laboratories and those of the research and development centers. The anticipated needs for research facilities to house continuing research activities are being further assessed with a view toward judicious investment of the 5-year authorization for construction, acquisition, and equipment of educational research facilities.

To meet the growing demands for information about completed and ongoing research, the Educational Research Information Center and its clearinghouse system are continuing to improve their services. *Research in Education*, which began monthly publication in November 1966, contains bibliographic citations and abstracts of new and completed projects. It also includes detailed indexes of cited research documents, and a cumulative index is to be published annually. By subscribing to this publication from the U.S. Government Printing Office, teachers, school administrators, and education researchers can stay abreast of much of the latest knowledge produced by educational research.

The Research Training Program, after an initial organization year, entered 1967 with plans to concentrate major efforts on expansion of training in areas of immediate critical need, such as training for activities related to development and dissemination of educational improvements.

In addition to strengthening these major programmatic activities, which give intensive and continuing attention to long-persistent concerns in education, the Office also recognizes the increasing

demand for a wide variety of new research, development, and dissemination projects to meet needs evident at the beginning of fiscal year 1967. The character of this demand is to some extent the outgrowth of local ferment for educational improvement, a ferment which has generated intense pressures for objective information upon which to make decisions about educational changes. Many of the new projects funded in 1967 reflect the effort of the Bureau of Research and its advisory groups to respond to particularly heavy demands for assessments of strengths and shortcomings of various educational approaches, for development of new programs and techniques to meet changing needs, and for evaluation of various educational improvement efforts.

Plans for fiscal year 1967 also called for establishment of a Regional Research Program to administer small project research and research development grants through nine regional offices. This move is designed to encourage broader participation in research activities, facilitate prompt consideration of proposals, and bring negotiation and other services closer to those carrying out the research. Besides permitting within-region competition for available funds, the new arrangement is expected to help match research efforts with educational needs of the region.

Pressures for research results, coupled with increasing competition for available funds, has led the Office of Education in fiscal year 1967 to depend heavily upon the advice of the Research Advisory Council and other advisory groups, both Government and nongovernment, in an effort to improve the system by which available research dollars can be spread over highly critical areas at the same time some support is reserved for new ideas. This effort has involved development of a management information system for use in systematic planning to assure a balanced total program; it also has necessitated development of improved selection procedures to assure that the total of individually funded projects and programs represents the best possible combination of research activities in terms of available funds and the Nation's pressing needs. Also, in 1967, special

advisory groups, such as the one for the laboratories, are being increasingly called upon for evaluation of funded activities, to help staff select the most promising current and future courses of action.

In all of these ways nongovernment advisers and staff in the Bureau of Research work together to honor the commitment of the Cooperative Research Act, as amended, to serve as a partner with

local, State, and private sources in supporting the search for promising educational improvements. Plans for 1967 are deliberately focused upon continuing and intensifying the impact of Cooperative Research Act support as a catalyst for helping local schools find and use the most effective programs and practices for their own settings, where educational changes of consequence must inevitably be wrought if tomorrow's schools are to serve tomorrow's needs.

**APPENDIX A**  
**Research and Development Centers**  
**Supported Under Authority of the Cooperative Research Act, as Amended**

At the close of fiscal year 1966, the nine R&D Centers listed below were receiving Cooperative Research support.

Fiscal year established	Name of center, location, and area of inquiry
1964	Learning Research and Development Center, University of Pittsburgh, Pa. (Learning research and instructional practices)
	Center for the Advanced Study of Educational Administration, University of Oregon, Eugene (School organization and administration in the societal context)
1965	Center for Research and Development for Learning and Reeducation, University of Wisconsin, Madison (Cognitive learning)
	Center for Research and Development on Educational Differences, Harvard University, Cambridge, Mass. (Effects of individual and cultural differences on the learning process)
1966	Research and Development Center in Educational Stimulation, University of Georgia, Athens (Programs of early and continuous stimulation, 3- to 12-year-olds)
	Research and Development Center in Teacher Education, University of Texas, Austin (Teacher education)
	Stanford Center for Research and Development in Teaching, Stanford University, Palo Alto, Calif. (Theory and practice of teaching and its effects)
	Center for Research and Development in Higher Education, University of California, Berkeley (Organization, purposes, and outcomes of higher education)
	Center for the Study of the Evaluation of Instructional Programs, University of California, Los Angeles (Study of evaluation processes and techniques)

Note.—In early fiscal year 1967, an additional center was established at Johns Hopkins University, Baltimore, Md., to study the influence of social and administrative organization of schools on learning of students from diverse backgrounds.

## APPENDIX B

### Educational Laboratories and Participating States

Nineteen Educational Laboratories were established during fiscal year 1966. (A 20th, the Central Atlantic Regional Educational Laboratory, was established early in fiscal year 1967, to round out a laboratory system to serve every section of the continental United States. A feasibility contract was also negotiated to study needs and resources for a laboratory in the Hawaii-Pacific Basin area.) The list below shows the name of each laboratory, its headquarters, and the States it serves.

Appalachia Regional Educational Laboratory, Charleston, W.Va. (West Virginia, the Appalachian counties of Virginia, Tennessee, Kentucky, Ohio, and Pennsylvania)

Center for Urban Education, New York, N.Y. (Metropolitan New York City and some neighboring cities, excluding Long Island) (Evolved from R & D center)

Central Atlantic Regional Educational Laboratory, Inc., Alexandria, Va. (Washington, D.C., and parts of Maryland, Virginia, Delaware, and West Virginia)

Central Midwestern Regional Educational Laboratory, Inc., St. Ann, Mo. (eastern Missouri, southern Illinois, and western Tennessee and Kentucky)

Cooperative Educational Research Laboratory, Inc., Northfield, Ill. (Indiana, and parts of Illinois, Michigan, and Wisconsin)

Eastern Regional Institute for Education, Syracuse, N.Y. (western Pennsylvania and New York State, excluding New York City)

Far West Regional Educational Laboratory, Berkeley, Calif. (northern California, all of Nevada except Clark County)

Educational Development Center, Newton, Mass. (New England)

Michigan-Ohio Regional Educational Laboratory, Detroit, Mich. (Michigan and Ohio)

Mid-Continent Regional Educational Laboratory, Inc., Kansas City, Mo. (western Missouri, central Oklahoma, and parts of Kansas and Nebraska)

Northwest Regional Educational Laboratory, Portland, Oreg. (Alaska, Montana, Oregon, Washington, and northern Idaho)

Regional Educational Laboratory for the Carolinas and Virginia, Durham, N.C. (North Carolina, South Carolina, and southern Virginia)

Research for Better Schools, Inc., Philadelphia, Pa. (eastern Pennsylvania, much of New Jersey and Delaware)

Rocky Mountain Regional Educational Laboratory, Denver, Colo. (all or portions of Colorado, Utah, Wyoming, Idaho, Montana, Arizona, Kansas, and Nebraska)

South Central Region Educational Laboratory Corporation, Little Rock, Ark. (Arkansas, Mississippi, and portions of Louisiana, Oklahoma, Kansas, and Missouri)

Southeastern Educational Laboratory, Atlanta, Ga. (Florida, Georgia, and Alabama)

Southwest Educational Development Corporation, Austin, Tex. (eastern and central Texas and southern Louisiana)

Southwest Regional Educational Laboratory, Inglewood, Calif. (southern California, southern Nevada, and southwestern Arizona)

Southwestern Cooperative Educational Laboratory, Albuquerque, N.Mex. (all of New Mexico and portions of Arizona, Texas, and Oklahoma)

Upper Midwest Regional Educational Laboratory, Inc., St. Paul, Minn. (Iowa, Minnesota, North Dakota, South Dakota, and part of Wisconsin)



## APPENDIX C

## Cooperative Research Obligations for Project and Program Support by State, Fiscal Year 1966

State <sup>1</sup>	Obligations (in thousands)	State <sup>1</sup>	Obligations (in thousands)
<b>TOTAL</b>	<b>\$ 50,857<sup>2</sup></b>		
Alabama	130	Montana	
Alaska	19	Nebraska	102
Arizona	89	Nevada	56
Arkansas	193	New Hampshire	41
California	7,131	New Jersey	178
Colorado	768	New Mexico	612
Connecticut	409	New York	7,265
Delaware	66	North Carolina	944
District of Columbia	688	North Dakota	124
Florida	2,241	Ohio	1,294
Georgia	978	Oklahoma	19
Hawaii	113	Oregon	2,139
Idaho		Pennsylvania	3,491
Illinois	2,753	Rhode Island	5
Indiana	772	South Carolina	90
Iowa	975	South Dakota	10
Kansas	99	Tennessee	394
Kentucky	223	Texas	1,425
Louisiana	38	Utah	90
Maine	3	Vermont	58
Maryland	365	Virginia	137
Massachusetts	5,026	Washington	234
Michigan	2,387	West Virginia	594
Minnesota	1,476	Wisconsin	2,028
Mississippi		Wyoming	40
Missouri	2,431	Puerto Rico	107

<sup>1</sup>Under Section 5 of the Cooperative Research Act, the term "State" includes "in addition to the States of the Union, the Commonwealth of Puerto Rico, the District of Columbia, Guam, American Samoa, and the Virgin Islands." Funds for Educational Laboratories and for consortiums of institutions which received Research Development Grants appear only under the institution which served as the contracting agency and its respective "State."

<sup>2</sup>Includes \$1.3 million in fiscal year 1966 funds for construction of and/or equipment for research facilities and \$6,500 of support for one project with Cambridge University, England, as the contracting agency.

---

 APPENDIX D

 Cooperative Research Activities  
 Supported During Fiscal Year 1966  
 (by State, institution, and amount of 1966 obligations)<sup>1</sup>

<u>Institution</u> <sup>2</sup>	<u>Title</u>	<u>Amount</u>
<b><u>ALABAMA</u></b>		<b><u>\$129,991</u></b>
Auburn University	Institute To Develop Educational Research Personnel	49,264
Auburn University	The Relationship Between the Principal and His Professional Staff in the Public School	4,986
Troy State College	Demonstration of a Nongraded Plan of an Elementary School, Utilizing Team Teaching and Programed Instruction To Facilitate Learning in Reading and Mathematics	7,500
Tuskegee Institute	The Process of Integrating White Faculty Members Into a Predominantly Negro College	9,000
University of Alabama, University	Graduate Research Training and Development Program	59,241
<b><u>ALASKA</u></b>		<b><u>19,246</u></b>
University of Alaska, College	A College Orientation Program for Alaskan Natives	19,246

<sup>1</sup>Funds for Educational Laboratories and for consortiums of institutions which received Research Development Grants appear only under the institution which served as the contracting agency.

<sup>2</sup>If apparent from the name of the institution, the city is not given.

---

---

<b><u>ARIZONA</u></b>		<b><u>89,047</u></b>
Arizona State University, Tempe	Undergraduate Training Program in Educational Research	12,500
Arizona State University	Planning Educational Experiments	52,979
Arizona State University	Problem Solving as a Function of Language	16,088
University of Arizona, Tucson	Environmental Factors Affecting the Intellectual Development of Mexican-American Children	7,480
<b><u>ARKANSAS</u></b>		<b><u>193,156</u></b>
South Central Region Educational Laboratory Corporation, Little Rock	South Central Region Educational Laboratory	180,705
Southern State College, Magnolia	Research Conference on Elementary School Guidance	12,451
<b><u>CALIFORNIA</u></b>		<b><u>7,131,117</u></b>
California Junior College Association, Bakersfield	Principles and Methods of Applied Research for Junior College Researchers	43,193
California State College, Dominguez Hills, Gardena	The Improvement of Teaching Procedures With Gifted Elementary and Secondary School Students	47,914
California State College, Dominguez Hills	A Communications System for Higher Education	47,761

---

---

**CALIFORNIA cont'd**

California State College, Fullerton	An Investigation Into the Ability of Children Within the Framework of the Guilford Structure of Intellect Model	7,498
California State College, Los Angeles	Investigation of Doctoral Programs in Special Education in Representative American Universities	6,278
California State College, Los Angeles	A Survey of Current Teaching Approaches to Image Making in the Art Schools of Britain	6,169
California State College, Los Angeles	Developing and Evaluating Art. Curriculums Specifically Designed for Disadvantaged Youth	56,070
California State College, Los Angeles	A Pilot Study of Art Education for the Economically and Socially Deprived Child	8,017
Center for Advanced Study in the Behavioral Sciences, Inc., Stanford	Postdoctoral Training in Educational Research	90,500
Claremont Graduate School and University Center	An Evaluation of Adequacy of Graduate Music Offerings at Representative California Colleges and Universities	7,378
Far West Laboratory for Educational Research and Development, Berkeley	Research Development Contract for a Far West Laboratory for Educational Research and Development	82,520
Far West Laboratory for Educational Research and Development	The Operation of the Far West Laboratory for Research and Development	383,500 <sup>3</sup>

---

<sup>3</sup>Amount includes funds for construction of and/or equipment for facilities for educational research.

---

---

**CALIFORNIA cont'd.**

The Frederick Burk Foundation for San Francisco State College	Teaching Strategies and Cognitive Functioning in Elementary School Children	33,482
The Frederick Burk Foundation for San Francisco State College	A Preliminary Investigation To Establish a Regional Center for Educational Developmental Studies of Disadvantaged Pre-school Children	32,327
Los Rios Junior College District, Sacramento	An Experimental Program Offering Junior College Remedial English Instruction Simultaneously to High School Seniors and Junior College Freshmen Via Open Circuit TV	58,795
North American Aviation, Inc., Anaheim	ERIC Information Retrieval, Indexing, and Searching System and Incorporation of P.L. 89-10 Title I Information Into ERIC System	177,570
Sacramento State College	State of the Knowledge of the Teaching of Vocabulary	19,135
San Diego County Department of Education	Effectiveness of a Second-Grade Language Arts Program	29,420
San Diego State College	Anthropometric Training Project	12,447
San Francisco State College	Development of a Social Competence Scale for Preschool Children	21,300
San Francisco State College	Methods of Teaching Braille Reading	30,582

---

---

**CALIFORNIA cont'd**

San Francisco State College	The Academic and Post-Graduate Careers of M.A. Graduates in General Humanities in a Liberal Arts College. A Critical Review of Theoretical Expectations for Their Academic and Post-Graduate Interests and Careers	8,969
San Francisco State College	Drama Education, Status and Improvement	50,226
San Francisco State College	The Relationship Between Teachers' Attitudes of Acceptance and Their Observations of Children	4,996
San Francisco State College	Development of a Comprehensive Curriculum Model for Social Studies, Grades 1-8, Inclusive of Procedures for Implementation and Dissemination	170,464
San Jose State College	Development and Evaluation of 12th-Grade Course in the Principles of Economics	130,559
San Jose State College	Effects of Preschool Stimulation Upon Subsequent School Performance Among the Culturally Disadvantaged	17,731
Southwest Regional Laboratory for Educational Research and Development, Santa Monica	Development of a Southwest Laboratory for Educational Research and Development	126,550
Southwest Regional Laboratory for Educational Research and Development, Santa Monica	The Operation of the Southwest Regional Educational Laboratory	902,725 <sup>3</sup>

---

<sup>3</sup> Amount includes funds for construction of and/or equipment for facilities for educational research.

---

---

**CALIFORNIA cont'd.**

Stanford University	The Conservation of Energy Concept in Ninth Grade General Science	26,058
Stanford University	A Comparison of Drawing Charac- teristics of Culturally Advantaged and Culturally Disadvantaged Children	17,135
Stanford University	Structure and Process of School- Community Relations	19,668
Stanford University	Determinants of Educational Expend- itures in Large Cities of the United States	36,668
Stanford University	Training Effects of Feedback and Modeling Procedures on Teaching Performance	40,423
Stanford University	Conference on Learning by Discovery	2,931
Stanford University	Development of Mathematical Con- cepts in Children	45,544
Stanford University	An Automated Primary-Grade Reading and Arithmetic Curriculum for Culturally Deprived Children	583,670
Stanford University	Research Training Program Develop- ment	22,572
Stanford University	Educational Research Training in Psychology, Curricular, Instruc- tional, Organizational or Mathe- matical Studies	224,075

---

---

**CALIFORNIA cont'd.**

Stanford University	An Analysis of the Concepts of Knowledge of Pierce and Dewey: Their Relation to Education	2,885
Stanford University	Language Development of Socially Disadvantaged Preschool Children	8,800
Stanford University	Dynamics of Personality Development During the College Years	37,098
Stanford University	An Experiment in Teaching Writing to College Freshmen	177,585
Stanford University	Application of Multifacet Analysis of Generalizability to Selected Data	8,799
Stanford University	Individual Differences in Learning Ability as a Function of Instructional Variables	42,060
Stanford University	Family and School Influence on the Educational Aspirations of Working-Class and Middle-Class 9th-Grade Boys	47,345
Stanford University	Developing New Materials for High School Geometry	50,354
Stanford University	Stanford Center for Research and Development in Teaching	349,625
Stanford University	Changing the Behavior of Social Studies Department Heads Through the Use of Feedback	5,113

---



---

**CALIFORNIA cont'd.**

State Department of Education, Sacramento	Demonstration of Differential Programming in Enrichment, Acceleration, Counseling, and Special Classes for Gifted Pupils, Grades 1-9	105,156
State Department of Education	An Experimental Study of Parent Participation as an Aid to the Child's Learning	7,500
State Department of Education	The Development of an Educational Information Retrieval System for the State of California	201,069
State Department of Education	To Develop Guides for Teaching English as a Second Language to Elementary School Pupils	75,629
State Department of Education	Data Processing for Pupil Personnel and Curricular Services	16,800
University of California, Berkeley	Training for Educational Research	52,394
University of California, Berkeley	A Study of the Development of Musicality in the Junior High School and the Contribution of Musical Composition to This Development	44,648
University of California, Berkeley	Center for Research and Development in Higher Education	315,657
University of California, Berkeley	Social Class Differences in the Role of Linguistic Structures in Paired-Associate Learning	29,182

---

---

**CALIFORNIA cont'd.**

University of California, Berkeley	A Doctoral and Development Program for Training Educational Researchers	149,970
University of California, Berkeley	Preparation of Teaching Guides and Materials on Asian Countries for Use in Grades 1-12	49,073
University of California, Berkeley	Language Ability in the High School, Grades 10, 11, and 12	29,509
University of California, Berkeley	A Study of the University Teachers of Great Britain	12,886
University of California, Berkeley	Teaching of Advanced Mathematical Concepts to Culturally Disadvantaged Elementary School Children	8,686
University of California, Berkeley	Criteria for Evaluation of Children's Artistic Creativity	9,000
University of California, Berkeley	An Exploratory Evaluation of Study Abroad	7,632
University of California, Berkeley	Second Year of a Longitudinal Study of Four Methods of Teaching Primary Reading	49,623
University of California, Berkeley	A Study of the Bases of Legislative Decisions on Educational Policy	45,799
University of California, Berkeley	Development of a Syllabus for an Advanced Level Undergraduate-Graduate Course in the Recent History of Math	7,500
University of California, Berkeley	The Effect of Subvocal Speech on Reading	83,095

---

---

**CALIFORNIA cont'd.**

University of California, Berkeley	The Design, Development and Testing of a Response Box, A New Component for Science Museum Exhibits	100,500
University of California, Berkeley	The Effect of Sibling Characteristics on Creative Interests and Achievement	8,889
University of California, Berkeley	Arithmetic Computation: Competence After Three Years of Learning Under Differing Instructional Programs	5,471
University of California, Davis	Values of High School Students and Their Teachers	7,345
University of California Davis	Study of University Physical Environ- ments to Facilitate Concentration and Study	34,000
University of California, Los Angeles	A Developmental Study of Medical Training Simulators for Anesthesiologists	131,035
University of California, Los Angeles	Development of a Performance Test of Teaching Proficiency	20,897
University of California, Los Angeles	Program for Graduate Training and Development in Product Research	45,827
University of California, Los Angeles	Teaching Geography in Grades 1 Through 3: Effects of Instruction in the Core Concept of Geographic Theory	22,977
University of California, Los Angeles	Development of Readability Analyses	45,710
University of California, Los Angeles	A Study of Word Association and Learning To Read	6,088

---

---

**CALIFORNIA cont'd.**

University of California, Los Angeles	A Pilot Study in New Theatrical Techniques for the Educational Theatre	9,000
University of California, Los Angeles	A Electronic Communication System for Classroom Use With the Poorly Motivated Student	4,980
University of California, Los Angeles	Analyses of a National Sample of College Environments	31,460
University of California, Los Angeles	The Value of the Spoken Response in Teaching Listening Skills to Young Children Through Programed Instruction	63,544
University of California, Los Angeles	Developmental Conference on Dance	51,841
University of California, Los Angeles	Center for the Study of the Evaluation of Instructional Programs	478,981 <sup>3</sup>
University of California, Los Angeles	Production of a Film Demonstrating the Teaching of English as a Second Language to Learners of Elementary School Age and Level	12,538
University of California, Los Angeles	The Establishment of an ERIC Clear- inghouse for Junior Colleges	108,731
University of California, Los Angeles	Development of Verbal Skills for Culturally Deprived Children	11,412
University of California, Los Angeles	Measuring Creative Social Intelligence	17,151
University of California, San Francisco	Computer Science Instruction in Elementary Grades	57,159

---

<sup>3</sup>Amount includes funds for construction of and/or equipment for facilities for educational research.

---

---

**CALIFORNIA cont'd.**

University of California, Santa Barbara	Seminar on the Purpose and Function of Elementary and Secondary School Research Consortiums	17,040
University of the Pacific, Stockton	Curriculum Development in Educational Research	13,986
University of the Pacific	Environmental Analysis of a Unique Liberal Arts College	14,750
University of Southern California, Los Angeles	Measurement of Social Intelligence	14,296
University of Southern California	Research Training in Education of Paraplegic, Cerebral Palsied, and Other Severely Physically Handicapped Students	49,392
University of Southern California	Undergraduate and Postgraduate Teaching of Neurology	28,627
University of Southern California	To Study the Effects of Audiovisual Materials on Changing the Attitudes of Culturally Disadvantaged Youth	9,000
University of Southern California	Unique Intellectual Abilities Used in Interpreting Information During Learning	45,198
<b><u>COLORADO</u></b>		<b><u>768,272</u></b>
Colorado College, Colorado Springs	A Conference on Advanced Placement in Art	8,283
Colorado State College, Greeley	Research Training and Development Program at Colorado State College	42,208

---

---

**COLORADO cont'd.**

Colorado State Department of Education, Denver	The Effectiveness of Teaching Reading in Kindergarten	5,041
Colorado State University, Fort Collins	Relative Merits of the Sale or Retention Under Lease of Public School Lands in Colorado	7,500
Rocky Mountain Educational Laboratory, Inc., Greeley	The Operation of the Rocky Mountain Educational Laboratory	368,200 <sup>3</sup>
United States Air Force Academy, Colorado Springs	An Evaluation of Two Techniques of Teaching Freshman Composition	3,527
University of Colorado, Boulder	Elementary Science Advisory and Research Project	54,650
University of Colorado	The Integration, Storage, and Retrieval of Bibliographical Data in English Studies	7,002
University of Colorado	Establishing a Graduate Program and Laboratory of Educational Research	62,420
University of Colorado	Content Analysis and Children's Responses to First-Grade Readers in the United States and Foreign Countries	32,885
University of Denver	Institute for Public School Researchers	29,800
University of Denver	Legal Work Status of Public School Classified Employees in the Fifty States	7,768
University of Denver	Legal Status of the Nonpublic College and University	7,405

---

<sup>3</sup>Amount includes funds for construction of and/or equipment for facilities for educational research.

---

---

COLORADO cont'd.

University of Denver	An Evaluation of the Effectiveness of Educational Audiology Upon the Language Development of Hearing Handicapped Children	6,391
----------------------	---	-------

Western Interstate Commission for Higher Education, Boulder	Research Development Contract for a Regional Educational Laboratory	125,192
---	---	---------

CONNECTICUT

408,925

Southern Connecticut State College, New Haven	Testing for Creative Traits of College Students	7,726
---	---	-------

Southern Connecticut State College	Graduate Research Training Program	88,680
------------------------------------	------------------------------------	--------

University of Connecticut, Storrs	The Effects of Community Structure on School Decisions	61,879
-----------------------------------	--	--------

University of Connecticut	Analysis of Essays by Computer	74,081
---------------------------	--------------------------------	--------

University of Connecticut	Graduate Training Program for Educational Researchers	60,000
---------------------------	---	--------

University of Connecticut	Discrimination Learning, Problem Solving, and Choice Patterning by Children as a Function of Incentive Value, Motivation, and Sequential Dependencies	13,987
---------------------------	---	--------

University of Connecticut	Analysis, Collation, and Dissemination of Research Pertaining to College and University Business Management	23,000
---------------------------	---	--------

---

---

**CONNECTICUT cont'd.**

Yale University, New Haven	Bases of School Children's Esthetic Judgment and Esthetic Preference	21,384
Yale University	Developing Musical Understanding in Secondary School Students	58,188

**DELAWARE**
**65,922**

Alfred I. DuPont School District, Wilmington	Development of Instructional Materials for a Fused Chemistry-Physics Course	6,922
University of Delaware, Newark	Teaching Reading at the Primary Level	16,060
University of Delaware	Automated Self-Instruction Directions for the Use of the Microscope	4,613
University of Delaware	Educator Alienation	38,327

**DISTRICT OF COLUMBIA**
**688,281**

American Association of Colleges for Teacher Education (NEA)	The Preparation of American Teachers in the Field of World Affairs	75,909
American Association for Health, Physical Education, and Recreation (NEA)	Cooperative Development of Design for Long-Term Research Project Directed Toward the Identification and Evaluation of a Conceptual Framework for the Curriculum in Physical Education, Grades Kindergarten through 16	8,076

---



---

**DISTRICT OF  
COLUMBIA cont'd.**

American Documen- tation Institute	Proceedings of the Symposium on Education for Information Science	6,984
American Educational Research Association (NEA)	AERA Workshop on the Design of Educational Experiments	6,696
American Educational Theatre Association	Description of Theatre Departments in American Higher Education	6,647
American University	The Organization and Administration of Orchestral Concerts for Music Education in Selected Cities	93,000
American University	Educational Research Training Program	30,000
Catholic University of America	Superintendents' Perception of the Impact of Various Groups on Schools	1,650
D.C. Teachers College	Preparation of Teacher-Training Aids for Process-Oriented Science Instruction	7,500
Gallaudet College	An English Curriculum for Deaf Students at the Secondary Level	37,300
Georgetown University	Relationship Between Measures of Academic Motivation and Achieve- ment in College	10,977
George Washington University	Conferences on the Present Status of Educational Research Activities	13,800

---

---

**DISTRICT OF  
COLUMBIA cont'd.**

George Washington University	A Pilot Teacher Training Program Using the Resources of an Art Museum	57,600
George Washington University	Evaluation of the Contribution of Special Programs in the Washington, D.C., Schools to the Prediction and Prevention of Delinquency	15,000
Howard University	Prejudices and Other Interracial Attitudes of Negro Youth	7,500
National Art Education Association (NEA)	International Leadership Conference in Art Education	8,050
National Art Education Association (NEA)	Conference of State Art Supervisors and Representatives from Professional Art Associations on Curriculum and Instruction Development in Art Education in the Fifty States	29,022
National Education Association	Innovation in Planning School Curriculums	60,378
National Science Teachers Association (NEA)	Conceptual Schemes in Science: A Basis for Curriculum Development	43,677
National Training Laboratories (NEA)	Regional Meetings in Evaluation Research	88,689
National Training Laboratories (NEA)	Special Project To Train Field Researchers	46,686
Smithsonian Institution	Conference on Museums and Education	33,140

---

---

<b>FLORIDA</b>		<b><u>2,240,917</u></b>
Brevard County Board of Public Instruction, Titusville	The Placement of Students in Non- graded High School	150,132
Florida Atlantic University, Boca Raton	A Study To Utilize Academic and Community Resources To Provide Serv- ices to Arts Organizations and Through Them to Schools and Colleges	6,626
Florida State University, Tallahassee	A Comparison of Various Techniques to Disseminate a New Science Curriculum in Florida	197,668
Florida State University	A First Step Towards the Implementa- tion of the Cambridge Mathematics Curriculum in a K-12 Ungraded School	8,989
Florida State University	How Elementary School Children Resolve Experimentally Induced Conflicts in Thinking	14,960
Florida State University	The Development and Evaluation of a Science Curriculum for Grades 7, 8, and 9	416,132
Florida State University	The Social Status of Pupils and the Social Composition of Schools: Their Independent and Joint Effects on Pupil Behavior	50,000
Florida State University	The Construction and Validation of Tests of the Cognitive Processes as Described in the <u>Taxonomy of Educational Ob- jectives</u>	8,516

---

---

**FLORIDA cont'd.**

Florida State University	Effect of Trimester School Operation on the Achievement and Adjustment of Kindergarten and First- Through Third-Grade Children	3,510
Florida State University	Sentence Structures Used by Superior Students in Grades 4 and 12, and by Superior Adults	3,110
Florida State University	Identification and Definition of Subject-Matter Content Variables Related to Human Aptitudes	26,575
Florida State University	A Curriculum Center To Develop and Test Sequential Approaches to English in Junior High School	49,130
Florida State University	Rule Generality and Consistency in Mathematical Learning	9,000
Florida State University	The Effects of Counselor Reinforcement on a Student's Negative Responses	4,592
Florida State University	An Analysis of High School Humanities Courses	8,994
Florida State University	Graduate Training for Research in Language Development	36,000
Florida State University	Public School Research Training Program	30,000
Southeastern Educational Corporation, Inc., Tallahassee	Research Development Contract for a Regional Educational Laboratory	141,209

---

---

**FLORIDA cont'd.**

Southeastern Educational Corporation, Inc.	Southeastern Regional Educational Laboratory (Program Operations)	362,100 <sup>3</sup>
University of Florida, Gainesville	The Problem of Under Achievement and Low Achievement in Mathematics Education	35,928
University of Florida	High School Self-Evaluation and Curriculum Change	46,922
University of Florida	Effect of Reward and Punishment on Stuttering in Children	8,516
University of Florida	An Investigation of Observer-Judge Ratings of Teachers' Competence, Phase II	88,248
University of Florida	Independent Study in Secondary Schools	10,952
University of Florida	Relationship Between Socioeconomic Factors, Educational Leadership Patterns, and Elements of Community Power Structure and Local School Fiscal Policy	80,120
University of Florida	The Preparation and Evaluation of an Experimental Independent Study Program for Gifted High School Under-achievers	9,577
University of Florida	Graduate Research Training Stipends	90,000
University of Florida	Spring Trimester Research Training Project	10,000

---

<sup>3</sup>Amount includes funds for construction of and/or equipment for facilities for educational research.

---

**FLORIDA cont'd.**

University of Florida	Institute for Training Local District Research Workers	34,912
University of Florida	Pilot Training Program in Undergraduate Educational Research	15,830
University of Miami, Coral Gables	Melbourne High School Pilot Study	7,373
University of Miami	Development and Evaluation of a Programed Text in Criminal Law	12,810
University of Miami	Planning and Creation of an Integrated, Two-Year Liberal Arts Curriculum in World Civilizations, for University Freshmen and Sophomores	46,560
University of Miami	Evaluation of a Program To Promote Scientific Careers in Gifted Students at the Secondary School Level	43,529
University of Miami	A College Level Art Curriculum in Glass	7,440
University of Miami	A Survey of Music Education Materials and the Compilation of an Annotated Bibliography	3,700
University of Miami	Training of Research Center Personnel	140,415
University of South Florida, Tampa	Pilot Project for Improving College Teaching	20,842

---

---

<b><u>GEORGIA</u></b>		<b><u>977,644</u></b>
<b>Emory University, Atlanta</b>	<b>Traineeships and Development for Doctoral Program in Educational Psychology</b>	<b>40,200</b>
<b>Emory University</b>	<b>The Effects of Shifting Medium of Expression on the Use of Concepts Among Children</b>	<b>7,480</b>
<b>Emory University</b>	<b>Program for Increasing Educational Research Activity at Emory Univer- sity</b>	<b>50,000</b>
<b>Morehouse College, Atlanta</b>	<b>A Working Conference on Coopera- tive Programs Among Universities and Predominantly Negro Colleges</b>	<b>24,566</b>
<b>Spelman College, Atlanta</b>	<b>An Analysis and Interpretation of Data on the Social Characteristics of Residents of "Vine City," an Urban Slum</b>	<b>5,995</b>
<b>University of Georgia, Athens</b>	<b>Comparison Between Selected Charac- teristics of Provisionally and Pro- fessionally Certified Beginning Teachers in Georgia</b>	<b>89,094</b>
<b>University of Georgia</b>	<b>Developing Competency in Written Composition in Children from Kindergarten through Elementary School by Means of Curriculum Materials</b>	<b>51,379</b>
<b>University of Georgia</b>	<b>Development of a Sequential Cur- riculum in Anthropology for Grades 1-7</b>	<b>65,202</b>

---

---

**GEORGIA cont'd.**

University of Georgia	Postdoctoral Research Training Program in Educational Stimulation	15,000
University of Georgia	Educational Research Training Application	84,000
University of Georgia	Improving Research Skills in Major School Subjects	15,120
University of Georgia	Training State Department of Education Personnel in Methods of Research of Data Handling	10,415
University of Georgia	Institute for Training Workers in Public Education	69,973
University of Georgia	Effects of College Student Interaction Upon Learning and Adjustment	35,385
University of Georgia	Research and Development Center in Educational Stimulation	401,118
University of Georgia	An Experimental Study in the Use of Programed Materials for Seventh-Grade Open-Ended Laboratory Experiences	4,376
University of Georgia	A Comparison of the Effects of Political Variables and Economic Variables on Educational Policy Outcomes in the American States	8,341

---



---

**HAWAII****113,026**

State Department of Education, Hilo	A Plan for Imparting Bilingual Skills to Monolingual Speakers of Hawaiian Pidgin in the Kindergarten, First, Second, and Third Grades, Through Linguistically Oriented Pedagogical Techniques	80,276
University of Hawaii, Honolulu	Analysis of Mathematical Abilities Required for Success in Ninth Grade Mathematics	7,380
University of Hawaii	A Study of Second Language Learning	25,370
<b>ILLINOIS</b>		<b>2,753,299</b>
American Library Association, Chicago	Pilot Project To Develop Requirements for Establishing an Information System for Research Activities in the Field of Librarianship and Information Science	25,469
Cooperative Educational Research Laboratory, Inc., Urbana	The Development of the Cooperative Educational Research Laboratory, Inc.	188,580
DePaul University, Chicago	Montessori Preschool Education	1,002
Illinois Institute of Technology, Chicago	After-School Study Centers: Experimental Materials and Clinical Research	35,018
Loyola University, Chicago	Problem Solving Processes Used by Elementary School Boys	25,197
Loyola University	Master of Arts and Development in Educational Research Degree Program	86,040

---

---

**ILLINOIS cont'd.**

Loyola University	Pre-service Preparation of Teachers in Educational Measurement	12,858
National Merit Scholarship Corporation, Evanston	Research Training Postdoctoral Fellowship	10,000
Northern Illinois University, DeKalb	Materials and Methods for Teaching Structural and Generative Grammar to High School Students and Their Teachers	39,020
Northern Illinois University	A Study of Faculty Participation in Student Personnel Services in Large Publicly Assisted Universities	8,787
Northern Illinois University	Individual Performance Differences on Programed Instruction	15,888
Northern Illinois University	Individualizing Instruction for Varying Levels of Knowledge	8,996
Northern Illinois University	Northern Illinois University Undergraduate Educational Research Training Program	39,750
Northern Illinois University	Children's Goals, Achievement, and Performance in Elementary School	24,340
Northwestern University, Evanston	A Data Retrieval Device for Use as a Guide to College Choice	55,077
Northwestern University	Preparation of a Complete Edition of the Writings of Herman Melville in Clear Text	87,529

---

---

 ILLINOIS cont'd.

Northwestern University	Social Studies Curriculum Study Center: A Sequential Curriculum on American Society for Grades 5-12	50,880
Northwestern University	Experimental Statewide Seminars in Teaching About Democracy and Totalitarianism	18,639
Northwestern University	How Children Conceptually Organize Musical Sounds	22,505
Northwestern University	A Study of the Aspirations of Married Women College Graduates	4,351
Northwestern University	Educational Decision-Making in Suburban Communities	18,368
Northwestern University	Research Seminar on Racial Issues Affecting School Administration in the Great Cities of America	11,263
Northwestern University	Curriculum Study Center in English Composition, Grades 4-12	36,994
Northwestern University	Influence of Identity Processes on Student Behavior and Occupational Choice	7,672
Southern Illinois University, Carbondale	Subregional Speech Variations in Vocabulary, Grammar, and Pronunciation	14,492
Southern Illinois University, Carbondale	Training of Educational Research Workers in Area of Culturally Deprived	30,000
Southern Illinois University, Edwardsville	Self-Control in Children	7,218

---

20

---

ILLINOIS cont'd.

University of Chicago	The Soviet Educational System: Its Role in the Political Develop- ment of the USSR (1917-67)	14,122
University of Chicago	Cross-National Study of Educational Attainment: Secondary School Science, Civics, Mother Tongue and Foreign Language	450,752
University of Chicago	The Relationships Among Vocational Success, Adult Values, and Child- Rearing Patterns	9,000
University of Chicago	The Effectiveness of Emphasizing Reading Skills in English Courses for Underachievers	8,750
University of Chicago	Feasibility Study of a New Basis for School Arithmetic	9,000
University of Chicago	Adaptation to School Settings: A Study of Children's Attitudes and Classroom Behavior	8,567
University of Chicago	Sociological Influences Upon the Achievement of Lower Class Negro Children	7,331
University of Chicago	Prediction of Adult Educators' Attitudes Toward Changes in Uni- versity Policies	8,046
University of Chicago	An Investigation Into Pure Groups: Their Characteristics and Opportu- nities	6,154

---

---

ILLINOIS cont'd.

University of Chicago	Statistical Laboratory Development Program	12,934
University of Chicago	Summer Institute for Research and Evaluation	24,942
University of Chicago	Graduate Research Training Program	90,000
University of Chicago	Postdoctoral Research Training Program	26,200
University of Chicago and Columbia University	Cross-National Study of Educational Attainment: Secondary School Mathematics	94,387
University of Chicago	Authority, Rules, and Aggression: A Cross-National Study of Socialization Into Compliance Systems	105,052
University of Chicago	The Interaction Between Education and Society in Chicago	27,558
University of Chicago	Instruction of High School Students in Reading for Different Purposes	948
University of Chicago	Student and First-Year Teachers-- Attitudes Toward Self and Others	15,519
University of Chicago	School Achievement as Related to Developmental Speech Inaccuracy	23,187
University of Chicago	Collective Action by Public School Teachers	19,340
University of Illinois, Chicago	Nonintellective Factors Associated with Scholastic Achievement	14,763

---

---

ILLINOIS cont'd.

University of Illinois, Urbana	Analysis of School Social Work Tasks	8,822
University of Illinois, Urbana	Development and Trial of a Two- Year Program of String Instruction	6,500
University of Illinois, Urbana	Demonstration Center: Part I-- Secondary School Programs for Gifted Students in English, Social Science, Mathematics, and Science; Part II-- Elementary School Programs in Scientific Inquiry for Gifted Students	72,187
University of Illinois, Urbana	Sequential Social Sciences Courses for the Secondary School	48,160
University of Illinois, Urbana	Characteristics of Professional Personnel in College and University Libraries	22,445
University of Illinois, Urbana	Research and Development Center for Preschool Disadvantaged Children, University of Illinois	272,304
University of Illinois, Urbana	Critique of Research Studies in Music Education	1,300
University of Illinois, Urbana	Development of Techniques To Analyze Teacher Strategy and Re- sulting Student Performance	20,471
University of Illinois, Urbana	A Project To Develop and Evaluate a Computerized System for Instructional Response and Analysis	73,970
University of Illinois, Urbana	Measurement of the Frequency With Which Subjects Use Associations When Learning Verbal Materials	8,988

---

---

ILLINOIS cont'd.

University of Illinois, Urbana	An Approach to Aesthetic Education	20,486
University of Illinois, Urbana	Postdoctoral Traineeship in Research on Measurement and Instruction in Higher Education	14,200
University of Illinois, Urbana	A Study of English Programs in Selected High Schools Which Do and Do Not Consistently Educate Outstanding Students in English	6,455
University of Illinois, Urbana	Acceleration of Intellectual De- velopment in Early Childhood	25,817
University of Illinois, Urbana	The Analysis and Synthesis of Problem- Solving Behavior	23,397
University of Illinois, Urbana	Communicating About Students in High School Faculties	2,026
University of Illinois, Urbana	Rule-Guided Behavior and Strategies in Teaching	34,469
University of Illinois, Urbana	Identification and Organization of the Major Topics and Literatures in Philosophical Foundations of Educa- tion	45,448
University of Illinois, Urbana	Illinois Statewide Curriculum Study Center in the Preparation of Secondary School English Teachers	154,990
University of Illinois, Urbana	Theory of Expectation Applied to Musical Listening	13,378
Western Illinois University, Macomb	Teaching Nonsingers To Sing in the Elementary School	15,101

---

---

<u>INDIANA</u>		<u>772,222</u>
Ball State University, Muncie	Effectiveness of Two Methodological Approaches (Experience Motivation vs. Media Motivation) in an Art Program in the Primary Grades	7,058
Ball State University	The Relationship of Art Quality to Sociological, Motivational, and Economic Factors	8,885
Ball State University	Advanced Educational Research Institute for Small College and University Personnel	54,982
Ball State University	Research and Evaluation Techniques: Preparing Designated Public School Personnel To Evaluate Present and Future Title I Projects	52,983
Ball State University	Aural and Visual Perception of Melody in Tonal and Atonal Musical Environments	21,242
Ball State University	Oral-Aural-Visual Stimuli Approach to Teaching Written Composition to 9th-Grade Students	35,616
Earlham College, Richmond	A Seminar in Basic Principles of Learning for Faculty Members of a Small Private Liberal Arts College	7,200
Indiana State University, Terre Haute	The Relationship Between Learning Concepts and Student Achievement	9,000
Indiana State University	Experimental Design for Local School Districts	40,295
Indiana University, Bloomington	A High School Curriculum Center in Government	46,546

---



---

**INDIANA cont'd.**

Indiana University	Foreign Students and Their American Student Friends	1,620
Indiana University	Differential Association of Elementary School Teacher Characteristics With School System Types	22,938
Indiana University	English Open to All Junior and Senior High School Students	52,256
Indiana University	Art Programs in Negro Colleges	17,892
Indiana University	An Observation Schedule To Identify Teacher-Classroom Variables Which Facilitate Pupil Creative Growth	8,989
Indiana University	A Study of the Position of State Departments of Public Instruction, Accrediting Agencies, and Selected National Professional Organizations Concerning Experimentation and Innovation in Public Secondary Schools	8,021
Indiana University	Establishment of an Educational Research Information Center Clearinghouse in Reading (ERIC-CRIER)	155,855
Indiana University	Doctoral Research Training Program To Train Experimental Investigation for Multiple-Section Speech Courses	36,000
Purdue University, Lafayette	A Study of Recommendations for Technical Education Curriculums	5,698
Purdue University	Social Science Education Consortium	15,390

---

---

INDIANA cont'd.

Purdue University	Selected Indicators of Behavioral Change in Children	5,997
Purdue University	Understanding of Concepts of Probability Theory by Junior High School Students	9,713
Purdue University	The Elementary Curriculum as a Factor in Racial Understanding	55,345
Purdue University	Purdue Undergraduate Participation Programs in Educational Research	27,200
Purdue University	An Integrated Curriculum in Literature, Language, and Composition for Junior High Schools	49,778
State Department of Public Instruction, Indianapolis	The Effect of a Summer Television Reading Program on the Achievement of Children	15,723

IOWA974,937

Grinnell College	Undergraduate Social Research Training: Problems of Educational Administration in Small Consolidated School Districts	17,300
Iowa State University of Science and Technology, Ames	Undergraduate Research Participation	15,000
Iowa State University of Science and Technology	Interdisciplinary Program and Research Experience for the Preparation of Educational Researchers	113,320

---

---

IOWA cont'd.

Iowa State University of Science and Technology	A Study To Determine the Effects of an Elementary School Enrichment Program on the School Achievement of Welfare Recipient Children	9,000
Iowa State University of Science and Technology	Use of Mathematics in the Simulation of Selected Problems of College Administration	7,492
State College of Iowa, Cedar Falls	Summer Institute for Training Public School Educational Researchers	47,291
State College of Iowa	The Effectiveness of College In- struction in Freshman Composition	30,450
State College of Iowa	Extension of a Project on Instruction in College Freshman Composition	8,867
State Department of Public Instruction, Des Moines	Learning by Observation of a Model Classroom Situation	244
University of Iowa, Iowa City	A Study of the Effects of Room Temperature on Learning	7,550
University of Iowa	A Study To Explore the Possible Uses of X-Ray Motion Picture Photography for the Improvement of Brass Instru- ment Teaching	2,625
University of Iowa	Administrators of Educational Research and Information Systems Training and Program Development	78,209
University of Iowa	The Development of Content and Materials for a Music Literature Course in the Senior High School	35,930

---

---

IOWA cont'd.

University of Iowa	Authoritative Texts of the Published Works of Mark Twain	84,742
University of Iowa	Learning of Aurally Received Verbal Material	9,824
University of Iowa	Preventive Measures To Reduce Reading Retardation in the Primary Grades	60,475
University of Iowa	A Study and Evaluation of Sight-singing and Ear Training Problems in the Classroom	6,502
University of Iowa	Evaluation of College-Level Instruction in Freshman Composition, Part II	4,279
University of Iowa	Educational Information Project	435,837
<u>KANSAS</u>		<u>98,758</u>
Kansas State Teachers College, Emporia	Professional Education for Secondary Teachers	18,632
Kansas State University, Manhattan	Educational Values of Low Income Rural Communities	7,500
McPherson College	A Workshop in Reading Research	2,841
University of Kansas, Lawrence	Relationships Between Perception and Reading	11,155
University of Kansas	American Indians in Rural and Urban Schools	35,740
University of Kansas	The Narrative Rate Preference of Retarded 12-Year-Old Boys	1,895

---

---

KANSAS cont'd.

University of Kansas	Self-Instructional Materials in Basic Music Theory for Elementary Teachers	7,409
University of Kansas	A Correspondence-Tutorial Method for Teaching College Freshman Composition	8,833
University of Kansas	The Classroom Behavior Setting: Its Nature and Relation to Student Behavior	4,753

KENTUCKY222,777

Eastern Kentucky State College, Richmond	An Institute To Develop Research Coordinators	34,289
Eastern Kentucky State College	An Undergraduate Research Training Program for Isolated Areas	20,800
University of Kentucky, Lexington	Research Training Institute for Selected Persons in Vocational Education Participating in Research and Development Activities	34,974
University of Kentucky	Special Institute for Training Research Utilization Specialists for Local School Systems	50,079
University of Louisville	A Study of Concept Learning in School Children	6,086
University of Louisville	Development of an Expanded Reading Code for the Blind	13,508
University of Louisville	The Comprehension of Rapid Speech by the Blind, Phase III	16,806

---

---

KENTUCKY cont'd.

Western Kentucky University, Bowling Green	Fundamentals of a Research Development Institute	41,235
--	--	--------

LOUISIANA37,727

Grambling College	A Comparison of Two Groups of Elementary Teacher-Trainees Whose Professional Experiences Differ in Organization, Scope, and Sequence	26,332
-------------------	--	--------

Tulane University, New Orleans	Effects of Generalizing in Learning	11,395
--------------------------------	-------------------------------------	--------

MAINE3,090

University of Maine, Orono	Development of Writing Skills in Secondary School and College	3,090
----------------------------	---	-------

MARYLAND365,432

Coppin State College, Baltimore	A Design for Teacher Education for Inner City Schools	73,752
---------------------------------	---	--------

Johns Hopkins University, Baltimore	Sources of Educational Climates in High Schools	24,735
-------------------------------------	---	--------

Johns Hopkins University	The Public Image of Education in Maryland	8,300
--------------------------	---	-------

Morgan State College, Baltimore	Improving the Reading and Writing Skills of Culturally Disadvantaged College Freshmen	12,834
---------------------------------	---	--------

---

---

MARYLAND cont'd.

Maryland State Department of Education, Baltimore	A Three-Year Experimental Study of the Effectiveness of Programed Instruction in Mathematics	3,775
Maryland State Department of Education	A Special Training Project for Selected Educational Research Workers in Maryland Public Education Agencies	4,914
Towson State College, Baltimore	Conference on Curricular and Instructional Innovations in State Colleges and Universities	34,520
Towson State College	Towson Educational Research Training Program	28,500
University of Maryland, College Park	Relationship Between Holland Vocational Preference Scores and Performance Measures of High School Students	16,166
University of Maryland	Research Specialist Program	48,000
University of Maryland	Research Design Major Program	24,000
University of Maryland	Development of a Programed Course for the Training of Indexers in Educational Documentation	85,936
<u>MASSACHUSETTS</u>		<u>5,026,076</u>
Amherst College	History and Social Studies Curriculum Materials: Average, Terminal, College-Bound, and Adults	83,932

---

---

**MASSACHUSETTS cont'd.**

Boston College, Chestnut Hill	Graduate Intern Program for Training in Educational Research	90,000
Boston College	The Influence of Individual vs. Group Instruction Upon Spatial Abilities of Preschool-Age Children	21,080
Boston College	Followup Study of Sensory Percep- tion of Preschool Children	9,000
Boston College	Ability of Certain Pupils To Under- stand and Apply Selected Concepts and Generalizations in Geography	8,586
Boston College	The Development and Testing of a Scale to Identify Male Dropouts at Liberal Arts Colleges	7,439
Boston University	Effects of Tape Listening on Perform- ances of Graduate-Student Counselor- Trainees	6,389
Boston University	Taped Interviews With Artists as Teaching Resources in Higher Educa- tion	8,569
Brandeis University, Waltham	The Educational Experience of the Intern	35,094
Children's Museum, Boston	The Development of Validated Museum Exhibits	23,235
Educational Services, Inc., Newton	Development of Materials in Mathe- matics and English for Precollege Centers for Students from Low-Income Families	121,844

---



---

**MASSACHUSETTS cont'd.**

Educational Services, Inc.	Regional Educational Laboratory	168,270
Harvard College, Cambridge	The Schooling Careers of Military Dependents: A Socio-Cultural Study	89,957
Harvard College	The Job Satisfaction, Career Satisfaction, and Level of Aspiration of School Principals	50,326
Harvard College	A Law and Social Science Curriculum Based on the Analysis of Public Issues	52,880
Harvard College	Liberal Journalism and American Education, 1914-40	6,752
Harvard College	A Philosophical and Historical Rationale for a New Approach to "Problems of Democracy"	8,880
Harvard College	Nontechnical Higher Education and the Development of American Society, 1814-60: A Case Study of Baptist- Affiliated Colleges	3,888
Harvard University, Cambridge	A Research Training Program for Social Studies Education	49,600
Harvard University	Research Training in Science Education	36,000
Harvard University	Educational Research Training Program in Human Development	48,000
Harvard University	A Cross-Cultural Study of Adolescent Societies	25,175
Harvard University	Research Program on Intellectual Develop- ment	196,741

---

---

**MASSACHUSETTS cont'd.**

Harvard University	Transformational Sentence-Embedding as a Method for Accelerating the Growth of Syntactic Fluency in the Composition of Written English	8,999
Harvard University	Investigation of 250 Juvenile Delinquents and 250 Nondelinquents To Establish Bases for Preventive Programs Involving Schools, Welfare Agencies, and Other Community Resources	18,000
Harvard University	Doctoral Research Training Program in Sociology of Education	66,000
Harvard University	Further Development of Materials for a High School Physics Course	1,901,786
Harvard University	The Center for Research and Development on Educational Differences	1,111,704
Harvard University	Urbanization and the Extension of Formal Education in Massachusetts, 1830-65	4,134
Harvard University	Study of School Integration	96,908
Massachusetts Institute of Technology, Cambridge	The Development of a Basic Science Course for Undergraduate Students in the Natural Sciences and Engineering	65,065
Massachusetts State Department of Education, Boston	Teaching Mathematics Through the Use of a Time-Shared Computer	162,786

---

---

**MASSACHUSETTS cont'd.**

Massachusetts State Department of Education	Development of a Pilot Program for a Cultural Approach to the Study of History in Grades 7 and 8	7,420
Massachusetts State Department of Education	A Project for the Improvement of Music Education at Elementary, Junior High, Senior High, and College Levels Through the Use of Non-Book Instructional Media (Reading)	33,950
Massachusetts State Department of Education	A Followup Study in Grade 2 of Pupils Who Received Special In- struction in Grade 1 Under Project 2702, Part I	31,514
Regis College, Weston	A Longitudinal Study of Career Development	7,984
Smith College, Northampton	American History Laboratory Project	67,570
Tufts University, Medford	The Development of Instructional Materials Pertaining to Race and Culture in America	44,949
Tufts University	Seminar To Initiate New Experiments in Undergraduate Instruction	118,440
University of Massachusetts, Amherst	Development of Three Applied Re- search Training Programs	90,000
University of Massachusetts	Changing Role Concepts of College Students	20,726
University of Massachusetts	A Feasibility Study of a New Mobile Multimedia Service for Have-Not School Districts	8,130

---

---

**MASSACHUSETTS cont'd.**

University of Massachusetts	Effects of Certain Prefreshman Orientation Experiences on Academic Progress	2,801
Wheaton College, Norton	Desegregation and the Negro College in the South	2,363
Wheelock College, Boston	Education and the Victorian Mind of England	3,210

**MICHIGAN**


---

**2,387,214**

Department of Public Instruction, Lansing	Differences in Selected Administrative Behaviors Among Administrators in Innovative and Noninnovative Public School Systems	6,200
Department of Public Instruction	An Educational Research Internship Program for the Department of Education, State of Michigan	32,400
Department of Public Instruction	The Relationship Between the Training, Experience, and Selected Personality Characteristics of Teachers and the Progress of Trainable Mentally Handicapped Children	19,680
Eastern Michigan University, Ypsilanti	Nonverbal Artistic Factors of Creativity	8,993
Eastern Michigan University	Educational Research Training Institute for Public School Personnel	50,228
Eastern Michigan University	Community Support for the Public Schools in a Large Metropolitan Area	53,543

---

---

**MICHIGAN cont'd.**

<b>Interlochen Arts Academy</b>	<b>The Development of a One-Year Curriculum in Applied Music Instruction for Potential Composers, Conductors, Performers, and Music Educators</b>	<b>110,000</b>
<b>Macomb County Community College, Warren</b>	<b>An English Composition Sequence for a Community College</b>	<b>14,872</b>
<b>Merrill-Palmer Institute, Detroit</b>	<b>Logical Operations and Concepts of Conservation in Preschool Children</b>	<b>8,964</b>
<b>Merrill-Palmer Institute</b>	<b>Identification and Assessment of the Thinking Ability of Young Children</b>	<b>31,270</b>
<b>Michigan State University, East Lansing</b>	<b>Relationship of School Administrators With Teacher Unions</b>	<b>5,462</b>
<b>Michigan State University</b>	<b>An Examination of the Careers of a Selected Group of Former Vocational Education Teachers</b>	<b>4,484</b>
<b>Michigan State University</b>	<b>Administrator and Teacher Job Expectations</b>	<b>8,951</b>
<b>Michigan State University</b>	<b>Perception of Repetition and Alteration of Thematic Materials in Music</b>	<b>3,091</b>
<b>Michigan State University</b>	<b>A Study of the Attitudes Toward Education Among Various National Groups</b>	<b>9,000</b>
<b>Michigan State University</b>	<b>A Conference To Stimulate Research and Development on Curricular and Instructional Innovations in Large Colleges and Universities</b>	<b>53,373</b>

---

---

**MICHIGAN cont'd.**

Michigan State University	A Study of Social Dialects in Detroit	121,540
Michigan State University	A Unified Composition Course for College Students	17,884
Michigan State University	A Study of Inquiry Patterns of Students in Teacher Training Programs	30,900
Michigan State University	Improvement of Problem-Solving Processes	9,144
Michigan State University	Graduate Training Program for Directors of Research	72,000
Michigan State University	Relationship of Self-Concept to Achievement in High School	21,177
Michigan State University	Motivational Factors Influencing Academic Achievement of Eleventh-Grade Puerto Rican High School Students	27,677
Michigan State University	Educational Goals of Negro and Caucasian Youth in Segregated and Interracial Schools	53,833
Michigan State University	A Comparison Between the Commuting and Noncommuting Student	2,990
Michigan State University	Unified Academic and Professional Experience in Language and Writing for the Preparation of Secondary School Teachers of English	24,881

---

---

**MICHIGAN cont'd.**

Oakland University, Rochester	Teaching Reading and Language Skills in Grades 2 and 3	30,285
Public Schools of the City of Ann Arbor	School Desegregation Via Compulsion Pupil Transfer: Its Effects on Ele- mentary School Pupils	73,966
University of Michigan, Ann Arbor	A Study of Some Factors Facilitating and Inhibiting the Adoption and Diffusion of New Classroom Practices	46,000
University of Michigan	Financial Analysis of Current Opera- tions of Colleges and Universities	51,507
University of Michigan	Characteristics of Effective College Teaching	85,584
University of Michigan	Educational and Vocational Motiva- tions of Students in Negro Colleges, and Some of Their Institutional and Subcultural Determinants	30,694
University of Michigan	Interuniversity Cooperation in the Development of Social Science Re- search in Race Relations	24,840
University of Michigan	Relationship Between School- Community Coordinating Procedures and Educational Motivation and Behavior of School Children	8,192
University of Michigan	Improvement of Cognitive Learning Under Conditions of Emotional Stimulation	17,954

---

---

**MICHIGAN cont'd.**

University of Michigan	Teacher Influence Patterns and Pupil Achievement in the Second, Fourth, and Sixth Grades	44,140
University of Michigan	An English Curriculum for Training Schools	28,169
University of Michigan	Stimulation, Adoption, and Adaptation of Selected Classroom Teaching Practices	24,127
University of Michigan	Children's Relationships with Younger and Older Peers	24,102
University of Michigan	Institutional Research	17,500
University of Michigan	Historical Research in American Education	30,000
University of Michigan	Michigan Interdisciplinary Research Training Program in Education	48,000
University of Michigan	Social Science Education Doctoral Program (Research Training)	48,000
University of Michigan	Graduate Training Program in Music Education Research	12,000
University of Michigan	Training in Research Skills of School System Personnel Involved in Educational Improvement Projects	17,846
University of Michigan	ERIC Clearinghouse for Counseling and Guidance	90,903
University of Michigan	Studies of Language and Language Behavior, Phase II	225,966

---



---

**MICHIGAN cont'd.**

University of Michigan	International Seminar on the Education of Music Teachers	59,333
University of Michigan	Student Development in College as Outcomes of Their Initial Characteristics and College Experiences	65,820
University of Michigan	An Interuniversity Program for the Development of Designs for Planned Educational Change	191,501
University of Michigan	The Formulation of British Colonial Education Policy, 1929-61	7,212
University of Michigan	The Way in Which the Organization of College Departments Affects the Performance and Attitudes of College Faculty	8,990
University of Michigan	A Pilot Project To Develop Materials for Use in the Preservice and In-service Mathematics Training of Elementary Teachers	8,985
University of Michigan	School-Related Attitudes and Behavior of Parents of Achieving Adolescents	8,983
University of Michigan	A Study of an Exploratory Technique Used in Educational Research	6,510
University of Michigan	A New Approach to English for Reluctant Students, Grades 7-9	8,762

---

---

**MICHIGAN cont'd.**

University of Michigan	An Analysis of the Specific Features Which Characterize the More Successful Programs for the Recruitment and Training of College Teachers	7,963
University of Michigan	A Classroom Experiment To Measure the Relative Efficiency of Two Different Linguistic Models in Their Application to the Teaching of English as a Foreign Language	6,432
University of Michigan	Investigation and Simulation of the Relationships Among Selected Classroom Variables	4,464
University of Michigan	Characteristics of Negro Students Attending Previously All-White Schools	8,890
University of Michigan	Changing Classroom Peer Relations and Standards in Grades 4, 5, and 6	25,336
Wayne State University, Detroit	A Study of Children's Behavior While Reading Orally	8,988
Wayne State University	Verbal and Nonverbal Learning in Children Including Those with Hearing Losses, Part II	29,179
Wayne State University	Probability Estimates of the Capacities of Intermediate Pupils To Understand Selected Physical Science Concepts	15,145
Western Michigan University, Kalamazoo	Guidelines for English in the Preparation Program of Elementary School Teachers and Secondary School English Teachers	93,038

---

---

MICHIGAN cont'd.

Western Michigan University	Graduate Research Training Program in Sociology of Education	24,000
Western Michigan University	A Predictive Screening Test for Children With Articulatory Speech Defects	5,349
Western Michigan University	Factors Affecting College Students' Achievement in Science	9,942

MINNESOTA1,475,833

Macalester College, St. Paul	The Effect of Visual Feedback on Pronunciation in Foreign Language Learning	14,278
Macalester College	Undergraduate Program in Elementary, Secondary, and Higher Educational Research	16,000
Minnesota National Laboratory (State Department of Education), St. Paul	Programed Correspondence Course in Algebra and Geometry for Inservice Teacher Training: Field Services	59,436
Minnesota State Department of Education	Effects of Modern and Conventional Mathematics Curriculums on Pupil Attitudes, Interest, and Perception of Proficiency	17,460
University of Minnesota, Minneapolis	Educational Restrictions to Agricultural Success and the Relationship of Education to Income Among Farmers	30,736
University of Minnesota	Academic Administrators and University Goals: A Study in Conflict and Cooperation	50,514

---

---

**MINNESOTA cont'd.**

University of Minnesota	Coordinating Center for First - Grade Research Programs	92,226
University of Minnesota	Preparation and Evaluation of Curricular Materials and Guides for English Language Study in Grades 7 to 12	49,255
University of Minnesota	Preparation and Evaluation of Social Studies Curriculum Guides and Materials for Grades K to 14	49,990
University of Minnesota	Longitudinal Study Through the Fourth Grade of Language Skills of Children with Varying Speech Sound Articulation in Kindergarten	39,582
University of Minnesota	Relationships Between Educational Theatre and Professional Theatre	60,772
University of Minnesota	Functional Relationships of Junior College Environments and Selected Characteristics of Faculties, Students, the Administration, and the Community	17,796
University of Minnesota	Program Development Project--Upper Midwest Regional Educational Laboratory	127,802
University of Minnesota	A Comparison of Two Methods of Teaching Concepts About the Plastics Industry for Industrial Arts Educa- tion	8,997
University of Minnesota	An Evaluation of Data for a Medical Specialist Preference Test	8,662

---

---

MINNESOTA cont'd.

University of Minnesota	Training Research Practitioners for Educational Institutions	39,720
University of Minnesota	Pilot Research Training Program With a Postdoctoral Internship	77,310
University of Minnesota	Summer Institute for Training Re- searchers in Occupational Education	34,997
University of Minnesota	Preparing Researchers in Vocational Education	30,000
Upper Midwest Regional Educational Laboratory, Inc., St. Paul	The Operation of the Upper Midwest Regional Educational Laboratory, Inc.	650,300 <sup>3</sup>

MISSOURI2,431,114

Central Midwestern Regional Educational Laboratory, inc., St. Ann	The Development of a Regional Educational Laboratory for the Central Midwest	141,333
Central Midwestern Regional Educational Laboratory, Inc.	The Operation of the Central Mid- western Regional Educational Labora- tory, Inc.	737,744 <sup>3</sup>
Mid-Continent Regional Educational Laboratory, Inc., Kansas City	Developmental Program for the Mid- Continent Regional Educational Laboratory	159,598

---

<sup>3</sup>Amount includes funds for construction of and/or equipment for facilities for educational research.

---

---

**MISSOURI cont'd.**

Mid-Continent Regional Educational Laboratory, Inc.	The Operation of the Mid-Continent Regional Educational Laboratory, Inc.	811,183 <sup>3</sup>
Junior College District of St. Louis	Motivation and Learning: A Com- parative Study of Programs Presented by Video Tape With and Without Motivating Materials	7,495
University of Missouri, Columbia	A Study of the Changes in Number of Negro Teachers and Students in the Various Primary and Secondary School Systems of the State of Missouri	3,136
Washington University, St. Louis	Development of a Model for the St. Louis Metropolitan Social Studies Center, Grades K-12	56,472
Washington University	Program for Training Research Scholars in Education	90,000
Washington University	Source Materials for General and Human Biology	11,239
Washington University	Some Determinants and Consequences of the Teacher's Perception of Causation	19,678
Washington University	A Sociological Case Study of the Formation of the St. Louis City- County Junior College District	7,292

---

<sup>3</sup>Amount includes funds for construction of and/or equipment for facilities for educational research.

---

---

**MISSOURI cont'd.**

Washington University	Organizing A Classroom Setting Which Will Promote Cooperative Behavior and Inhibit Aggressive Behavior	7,588
Washington University	An Exploratory Study of Collective Values and Conflicts Among College Professors	7,312
Webster College, Webster Groves	A Modern Mathematics Program as It Pertains to the Interrelationships of Mathematical Content, Teaching Methods, and Classroom Atmosphere (The Madison Project)	271,342
Webster College	Curriculum Innovation in the Fields of History, Science, Music, and Art Within a Single Institute	99,702

**NEBRASKA**


---

 101,790

University of Nebraska, Lincoln	The Influence of Speed and Prior Knowledge and Experience on Adult Learning	1,258
University of Nebraska	A New Approach to Curriculum Evaluation	8,681
University of Nebraska	The Effects of Selected Characteristics in Programed Instruction on Errors, Rate of Learning, and Retention	8,818
University of Nebraska	A Developmental Conference for the Purpose of Considering the Problems of Curriculum Development for Elementary Inservice Education in English	19,924

---

---

NEBRASKA cont'd.

University of Nebraska	An Analysis of Children's Com- position, Grades 2-6	7,875
University of Nebraska	An Advanced Placement Program in High School Correspondence Study	5,621
University of Nebraska	An Articulated Program in Com- position, Grades K-13	49,613

NEVADA56,200

University of Nevada, Reno	Social Psychology of Education (Research Training)	56,200
-------------------------------	---	--------

NEW HAMPSHIRE41,042

Colby Junior College, New London	Assessment of the Intellectual- Social-Cultural Environment Which Is Characteristic of a Private Junior College for Women	308
Dartmouth College, Hanover	A Preparatory Study of the Introduc- tion of New Science Curricular Materials and Procedures into the Elementary Grades of Two School Districts	7,198
Dartmouth College	Evaluation of Project ABC (A Better Chance): An Evaluation of Dart- mouth College-Independent Schools Scholarship Program for Disadvan- taged High School Students	23,114
University of New Hampshire, Durham	Relationship Between the Way General and Specific Principles Are Learned and How They Are Used	10,422

---



---

<b>NEW JERSEY</b>		<b>177,611</b>
Drew University, Madison	The Effectiveness of Providing Immediate Evaluation of a Student's Work in Freshman Composition	8,071
Educational Testing Service, Princeton	Postdoctoral Fellowship Program in Educational Research	56,500
Educational Testing Service	Planning Tests To Measure Outcomes of Education Through Vision	9,000
Princeton University	Conferences in Theatre Research	37,500
Princeton University	An Inventory of Research and Theory Regarding the Relationship Between Education and Citizenship	19,580
Rutgers, The State University, New Brunswick	Relationships Between Creativity and Risk Taking in Fifth-Grade Children	5,070
Rutgers	Effectiveness of Public Library Services: Indexes of Measurement and Their Relation to Financial Support	8,869
Rutgers	A Study of the Effects of Awareness on Concept Formation	3,364
Rutgers	Comparison of Three Methods of Reading Instruction	29,657
<b>NEW MEXICO</b>		<b>612,266</b>
New Mexico State University, University Park	Interdisciplinary Graduate Program for the Preparation of Researchers in Elementary, Secondary, and Higher Education, 1966-67	71,760

---

NEW MEXICO cont'd.

New Mexico State University	Speech and Language Therapy Under an Automated Stimulus Control System	66,081
New Mexico State University	ERIC Clearinghouse for Small Schools and Rural Compensatory Education	130,337
Southwest Cooperative Educational Laboratory, Albuquerque	The Further Development and Pilot Operation of the Southwestern Cooperative Educational Laboratory	335,800 <sup>3</sup>
University of New Mexico, Albuquerque	Teacher Personality, Teacher Behavior, and Their Effects Upon Pupil Achievement	8,288

NEW YORK7,264,964

Alfred University	A Study of the Ways in Which Rejected Children Behave	5,424
Board of Education, New York City	A Project To Demonstrate the Effectiveness of a School-University Teacher Education Center in Preparing Teachers of Disadvantaged Children	179,765
Board of Education, New York City	Teacher Selection Methods	9,995
Center for Urban Education, New York City	Research and Development Center, Center for Urban Education	1,019,958
Center for Urban Education	Operation of an Educational Laboratory for the New York Metropolitan Area	1,228,100 <sup>3</sup>

---

<sup>3</sup>Amount includes funds for construction of and/or equipment for facilities for educational research.

---

---

**NEW YORK cont'd.**

City University of New York	A Continuation of the CRAFT Project (Comparing Reading Approaches in First-Grade Teaching with Educationally Disadvantaged Children)	53,374
City University of New York	Investigation of Fiscally Independent and Dependent City School Districts	73,058
City University of New York	Motivational Factors Influencing Persistence in Teaching as Revealed by Interviews	8,890
City University of New York	Development of Marketable Typing Skill: Sensory Processes Underlying Acquisition	420
City University of New York	Establishment of an ERIC Unit on the Preparation of Urban School Personnel	135,405
City University of New York (Brooklyn College)	Recent Curriculum Developments at the Middle Level of French, West German, and Italian Schools	1,620
City University of New York (City College)	Effective Interaction Between Older and Younger Pupils in an Elementary School "Peace Corps" Project	7,500
City University of New York (Hunter College)	Communication Patterns in Integrated Classrooms and Preintegration Subject Variables as They Affect the Academic Achievement and Self-Concept of Previously Segregated Children	6,848
City University of New York (Hunter College)	Bilingual Readiness in Primary Grades	50,563

---

---

NEW YORK cont'd.

City University of New York (Hunter College)	Development of Reading and English Language Materials for Grades 7-9 in Depressed Urban Areas	65,993
Clarkson College of Technology, Potsdam	The Collection and Statistical Eval- uation of Quantitative Data for Hand- Eye Coordination With Respect to Determining Its Correlation With Reading at Both the Primary and Secondary School Levels	8,292
Colgate University, Hamilton	To Explore Relationships Between Under- standing and Drill in the Learning Process	4,801
Columbia University, New York City	Factors Related to the Participation of Adults in Education Programs	53,720
Columbia University	A Study of the Nonstandard English of Negro and Puerto Rican Speakers in New York City	33,932
Columbia University	College Enrollment Projections to 1975 and 1980 on the Basis of a New Census Bureau Survey	98,532
Columbia University	An Exploratory Study of the Relation- ship of Auditory-Visual and Tactual- Visual Integration to Intelligence and Reading Achievement	4,680
Columbia University	Actual and Perceived Consensus on Educational Goals Between School and Community	33,620
Columbia University	Conference To Explore the Factors In- volved in Conducting a Survey of Young People's Attitudes Toward American Liberties	23,900

---

---

NEW YORK cont'd.

Columbia University	The Nonreturning Foreign Student: The Israeli Case	56,232
Columbia University	Training for Research in Sociology of Education	18,900
Columbia University	Further Training for Research in Sociology of Education	54,000
Columbia University	Educational Research Training Pro- grams (Various)	223,140
Columbia University (Teachers College)	Use of a Data Storage and Retrieval System To Teach Elementary School Children Concepts and Modes of In- quiry in the Social Sciences	52,088
Columbia University (Teachers College)	Curriculum for Secondary School Mathematics	64,578
Columbia University (Teachers College)	Logical Thinking in Second Grade	31,781
Columbia University (Teachers College)	An Exploration of the Uses of Rhythmic Movement To Develop Aesthetic Con- cepts in the Primary Grades	9,000
Columbia University (Teachers College)	Teaching English as a Second Language	56,455
Columbia University (Teachers College)	Accelerated and Enriched Curriculum Programs for Academically Talented Students: Mathematics	11,686
Columbia University (Teachers College)	Syntactic Structure and Children's Learning	6,122

---

---

**NEW YORK cont'd.**

Columbia University (Teachers College)	Analysis of the Rationale and Procedures of Long-Range Planning	8,650
Columbia University (Teachers College)	Program Development, Department of Philosophy and the Social Sciences (Research Training)	30,000
Cooper Union, New York City	Logical Analysis Skill as a Tool for Career Guidance	2,662
Cornell University, Ithaca	Development of a New Approach to Teaching Introductory Social Science in College	51,000
Cornell University	Balance Between Pictures and Text as an Incentive to Reading Printed Material	7,154
Cornell University	Project Literacy: Continuing Activities	93,032
Cornell University	Evaluating the Use in Other Schools of Assessment Procedures Developed in One School	15,972
Cornell University	The Development of Linguistic and Con- ceptual Competence and Performance	18,462
Cornell University	The Analysis of Reading Skill: A Program of Basic and Applied Research	59,685
Cornell University	Development and Evaluation of Pro- grams for Faculty, Staff, and Student Exchange Between Two Institutions of Higher Education	51,536
Cornell University	Student Characteristics and Learning Structures: Programed, Conventional	20,295

---

---

**NEW YORK cont'd.**

Cornell University	A Study of Community Factors Related to Turnover of Superintendents	59,097
Cornell University	Graduate Training Program for Research Methodologists	24,000
Cornell University	Graduate Research Training Program in the Foundations of Education	48,000
Cornell University	Graduate Research Training Program in Curriculum and Instruction	35,640
Eastern Regional Institute for Education, Inc., Albany	Development of Regional Educational Laboratory	199,613
Fordham University, Bronx	Graduate Research Training Program of the School of Education	55,325
Hofstra University, Hempstead	The Effect of Various Training Procedures on the Learning of Pre-Number Concepts	8,280
Institute of Educational Technology, New York City	Programing Visual Behavior	8,424
Juilliard School of Music, New York City	An Enlarged Music Repertory for Kindergarten Through Grade 6	119,070
Manhattanville College of the Sacred Heart, Purchase	A Study of New Concepts, Procedures, and Achievements in Music Learning as Developed in Selected Music Education Programs	29,669

---

---

**NEW YORK cont'd.**

Modern Language Association of America, New York City	Conference of Directors of the English Curriculum Development and Demonstration Centers To Evaluate the Progress of Their Projects	5,536
Mount Vernon Public School District, Mount Vernon	A Voluntary Prekindergarten Language Development and Reading Program for the Entire Four-Year-Old Population of a City	274,380
New School for Social Research, New York City	The Culture of Schools (Started at Syracuse Univ., N.Y.)	95,217
New York Institute of Technology, Inc., New York City	A Model for the Use of Computers To Adjust Instruction to Individual Student Learning Rates	8,931
New York Medical College, New York City	The Development of Auditory Discrimination	22,846
New York State Department of Education, Albany	Prekindergarten Programs for Educationally Disadvantaged Children	79,778
New York State Department of Education	Evaluation of School-to-Home Telephone Instruction of Physically Handicapped Home-Bound Adolescents	33,741
New York State Department of Education	Comparison Between Students From Two - and Four-Year Colleges	9,115
New York State Department of Education	Science Instruction in Spanish for Students of Spanish-Speaking Background	31,003

---



---

**NEW YORK cont'd.**

New York State Department of Education	Musical Ability Utilization-- Phase One: Screening and Testing Construction; Phase Two: Educa- tional Program and Outcome	24,840
New York State Department of Education	Training and Development Program for Educational Research Personnel for School Service	323,055
New York State Department of Education	The Production and Evaluation of Three Computer-Based Economics Games for the Sixth Grade	76,518
New York University, New York City	The Development of International Intercultural Schools in Western Europe From 1918 to 1963	7,292
New York University	An Investigation of the Relation Between Risking Achievement and One Aspect of Realism Among Seven - to Twelve-Year-Old Boys	3,407
New York University	The Interaction of the Adult and the Child in the Preschool Setting	56,004
New York University	The Development of Guidelines for Classifying and Writing Abstracts of Dance Research	9,000
New York University	National Conference To Improve the Effectiveness of State Supervision of Music	8,623
New York University	The Interplay of Some Ego Functions in Six-Year-Old Children	8,974

---

---

**NEW YORK cont'd.**

New York University	Developing Taxonomies of Organizational Behavior in Education	79,982
New York University	Attitudes and Perception of Desirable Traits and Behaviors of Teachers	21,618
New York University	Demonstration of Linguistics Programs in Secondary Schools	51,642
New York University	A Pilot Project To Develop an Elementary Science Sequence	49,052
Pace College, New York City	The Role of the American Negro in the Fields of Science	5,468
Pratt Institute, Brooklyn	A Pilot Research Study of Art Facilities in Colleges and Universities	9,000
Rensselaer Polytechnic Institute, Troy	Assessment of Modular Coordination Practices in School Planning and Construction	27,924
Rockland Community College, Suffern	Analysis and Development of a Semiautomated Bus Utilization and Scheduling System (BUSS)	27,186
Rockland Community College	A Research Training Institute for Junior College Personnel	19,774
Sarah Lawrence College, Bronxville	Decision-Making in the School Integration Controversies of New York City	65,976
Sarah Lawrence College	A Study of Visual Factors in Concept Formation	23,000

---

---

**NEW YORK cont'd.**

State University of New York, State Education Department, Albany	A Feasibility Study To Determine Need and Function of an ERIC Documentation Center for State Educa- tion Department Publications	7,500
State University of New York, Albany	Cost Analysis of Automated Scheduling	6,800
State University of New York, Brockport	Simulation and Analysis of Problems of Beginning Teachers	24,254
State University of New York, Buffalo	The Comparison of the Effective- ness of Linguistically Oriented and Traditional Methods of English Instruction	8,504
State University of New York, Buffalo	The Measurement and Effect of Risk Taking on Objective Examination	8,994
State University of New York, Buffalo	Conference on the Role of Crafts in Education	31,184
State University of New York, Fredonia	An Instructional Improvement Pro- ject in Modern Mathematics for Prospective Elementary School Teachers	9,000
State University of New York, Oswego	Field Study in Industry for the Prepar- ation of an Industrial Arts Major	25,553
Syracuse University	A Study of Integration in Racially Imbalanced Urban Public Schools	34,000
Syracuse University	Electrical Science Courses for Engineering College Sophomores	39,205

---

---

**NEW YORK cont'd.**

Syracuse University	Identification of Major Social Science Concepts and Their Utilization in Instructional Materials	63,848
Syracuse University	A Center for Demonstrating the Teaching of Reading to Students in Grades 7-12	31,824
Syracuse University	Development of a Common Framework for Characterizing Students and Colleges	6,384
Syracuse University	A Study of the Effectiveness of Four Methods of Speed Reading Instruction	4,020
Syracuse University	Some Behavioral Correlates of Organizational Climates and Cultures	7,986
Syracuse University	An Analysis of Upper Mobility in Low Income Families	9,000
Syracuse University	An Investigation Into the Use of Different Film Modeling Techniques on the Activation and Generalization of the Conservation of Substance Problems in Children	7,032
Syracuse University	Metropolitanism and Federal Aid for the Passage and Impact of the 1965 Aid to Education Act	5,070
Syracuse University	Critical Reactions, Self Concept, and Behavioral Preferences	9,000
Syracuse University	The Fiscal Implications of Dependent and Independent School Systems	5,573

---

---

NEW YORK cont'd.

Syracuse University	Development of a Computer Model of the Factors Which Influence High School Students To Continue or Discontinue Their Education	9,000
Syracuse University	A Comparison of Three Methods of Teaching Reading in the Second Grade	37,848
Syracuse University	The Culture of Schools	115,578
Syracuse University	An Historical Analysis of the G.I. Bill and Its Relationship to Higher Education	8,892
Syracuse University	Establishment of a Prototype System for a National Adult Education Library	90,170
Syracuse University	Dual Specialization Program for the Preparation of Educational Researchers	66,000
University of Rochester	Materials Used in Teaching Foreign Language to Secondary and College Students	21,266
University of Rochester	A Study of Factors Which Affect the Degree of Job Satisfaction and Job Dissatisfaction Among Teachers	7,679
University of Rochester	Eidetic Imagery in Children	19,151
University of Rochester	The Museums as a Social Context for Art	6,000
University of Rochester	Followup Study of Children Who Participated in a Preventative Mental Health Program	15,020

---

---

NEW YORK cont'd.

University of Rochester	Role of School Counselors and Clergymen in Helping Parents and Adolescents Achieve Educational Goals Through Group Work	6,648
Valhalla Union Free School District #5	A Formal Course in Oceanography at the Secondary School Level Through Independent Study	7,000
Vassar College, Poughkeepsie	Antecedents and Consequences of Intuitive Thinking	13,717
Yeshiva University, New York City	Stimulation and Development of Research Related to the Education of the Disadvantaged and/or Segregated	169,338
Yeshiva University	ERIC Information Retrieval System on the Disadvantaged	230,106

NORTH CAROLINA

Duke University, Durham	Management and Coordination of a Review and Evaluation of the Research on Higher Education	67,966
East Carolina College, Greenville	The Utilization of Instructional Television in Music Education	7,500
Learning Institute of North Carolina, Inc., Quail Roost	Regional Educational Laboratory for the Carolinas and Virginia	190,209
North Carolina College at Durham	Programmatic Support for the Development of Research Capacity	50,000

---

---

NORTH CAROLINA cont'd.

State Board of Education, Raleigh	The Development and Evaluation of an Experimental School for High Potential Underachievers	547,890
State Department of Public Instruction, Raleigh	First Grade Reading Instruction	26,201
University of North Carolina, Chapel Hill	Social Factors in Educational Achievement and Aspirations Among Negro Adolescents	5,931
University of North Carolina, Chapel Hill	The Effect of Programed Instruction in Special Skills During the Pre- school Period on Later Ability Patterns and Academic Achievement	9,725
University of North Carolina, Chapel Hill	An Investigation of Existing Out- door Drama Techniques and a Determination of Methods To Improve Training	7,410
University of North Carolina, Chapel Hill	The Public Library Executive: An Exploration in the Role of an Emerging Profession	7,500
University of North Carolina, Greensboro	Programed Instruction and the Demonstration Method of Teaching at the Junior High School Level	23,446
<u>NORTH DAKOTA</u>		<u>124,500</u>
Jamestown College	Programmatic Support for the Development of Research Capacity	50,000

---

---

**NORTH DAKOTA cont'd.**

University of North Dakota, Grand Forks	A Graduate Program Training Educational Researchers for Rural America	62,600
University of North Dakota	Effectiveness of Counseling and Guidance Techniques for Under- achieving Elementary School Students	11,900

**OHIO**
**1,293,605**

Antioch College, Yellow Springs	Workshop Conference To Foster Innovation in Higher Education	64,925
Bell & Howell Company, Cleveland	ERIC Document Reproduction Service	24,750
Denison University, Granville	A Survey of Research Needs of the Art Departments of Small Liberal Arts Colleges in Ohio and the Midwest	9,000
The Institute for the Development of Educational Activities, Dayton	A National Program in Early Educa- tion	20,000
Kent State University	An Experimental Study of Televised Food Demonstration To Determine the Effectiveness of Presentation Methods	7,367
Kent State University	The Relationship of Prediction to Art Performance and Judgment	1,986
Kent State University	The Development of First-Grade Materials on "Families in Japan"	8,196

---



---

OHIO cont'd.

Miami University, Oxford	Artists' Ideas About Art and Their Use in Education	7,488
Miami University	A Study of Programed Teaching for Improving Learning Skills	29,016
Michigan-Ohio Regional Educational Laboratory, Inc., Columbus	The Development of the Michigan- Ohio Regional Educational Laboratory, Inc.	184,240
Oberlin College	Supportive Interventions for Higher Education Among Students of Dis- advantaged Backgrounds	14,451
Ohio State University, Columbus	A Conference on Research in Music Education	28,609
Ohio State University	Strategies for Educational Change	36,642
Ohio State University	The Development of an ERIC Clearing- house for Science Education	122,031
Ohio State University	A Developmental Conference To Establish Guidelines for the Teaching of Art Appreciation	22,653
Ohio State University	The Nature and Range of School Counselor Sub-Roles	6,036
Ohio State University	An Intern Program for Teachers Assigned to Urban Neighborhoods of Low Income	71,249
Ohio State University	A Diagnostic Testing Program With Appropriate Autoinstructional Treat- ments to Meet Individual Differences in Learning	45,749

---

---

OHIO cont'd.

Ohio State University	Staff Conflicts in the Public Schools	28,220
Ohio State University	Development of Economics Curricular Materials for Secondary Schools	75,737
Ohio State University	A Training Program in the Use of Management Information Systems in Educational Research and Development Activities	29,020
Ohio State University	Evaluation and Synthesis of Research Studies Relating to Music Education	6,474
Ohio State University	The Influence of Vision Training Upon the Subsequent Reading Achievement of Fourth-Grade Children	14,978
Ohio State University	The Impact of the "Hawthorne Effect" in Experimental Designs in Educational Research	6,036
Ohio State University	Critical Reading Ability of Elementary School Children	33,576
Ohio State University	Development of Composition Programs Based on Generative Grammar and Psycholinguistic Theory for Grades 7-9	35,849
Ohio State University	An Investigation of Factors Influencing the Training of Educational Researchers	30,628
Ohio State University	Study of Roles for Researchers in Education	33,482
Ohio University, Athens	A Study of the Relationships Between the Reading Done by College Freshmen and Aptitude and Scholastic Achievement	6,583

---

---

OHIO cont'd.

Southwestern Ohio Educational Research Council, Inc., Middletown	An Educational Research Training Center	72,000
State Department of Education, Columbus	A Program of Training in Research and Evaluation	5,156
University Council for Educational Administration, Columbus	Revising and Updating the Jefferson Township Simulation Materials	68,865
University of Akron	Teacher and Pupil Attitude and Performance in Relation to Number of Books Used in First-Grade Reading	24,587
University of Cincinnati	The "House" System in the British Comprehensive (Secondary) Schools	8,598
University of Cincinnati	An Analysis of Student Attitudes Towards Contemporary American Music	7,494
University of Toledo	An Introduction to Research Methodology: A Two-Week Workshop	7,075
Western Reserve University, Cleveland	Multidisciplinary Ph.D. Research Training and Curriculum Program Development	79,980
Western Reserve University	A Comparative Study of Programed and Traditional Techniques for Teaching Music Reading in the Upper Elementary Schools	2,621

---

---

OHIO cont'd.

Western Reserve University	Development and Trial in a Junior and Senior High School of a Two-Year Curriculum in General Music	12,257
----------------------------	--	--------

18,665OKLAHOMA

Oklahoma State University, Stillwater	The Effect of Extrinsic Rewards on Motivation	2,270
---------------------------------------	---	-------

Oklahoma State University	Preschool Children's Willingness To Try Difficult Tasks	9,927
---------------------------	---	-------

Southeastern State College, Durant	Exploratory Type of Evaluation of TV Training of Elementary Mathematics Teachers	6,468
------------------------------------	--	-------

OREGON2,138,847

Northwest Regional Educational Laboratory, Portland	Research Development Contract for a Northwest Regional Educational Laboratory	149,813
---	---	---------

Northwest Regional Educational Laboratory	The Operation of the Northwest Regional Educational Laboratory	513,810 <sup>3</sup>
---	--	----------------------

Oregon College of Education, Monmouth	Postdoctoral Resident Program in Instructional Research	75,000
---------------------------------------	---	--------

Oregon College of Education	Evaluation of Electronic Self-Instruction on Piano Keyboard	17,518
-----------------------------	---	--------

Oregon College of Education	A Study To Determine the Feasibility of Adapting the Carl Orff Music Approach to Elementary Schools in America	8,992
-----------------------------	--	-------

---

<sup>3</sup>Amount includes funds for construction of and/or equipment for facilities for educational research.

---

---

OREGON cont'd.

Oregon State University, Corvallis	Effectiveness of Counseling in College Residence Halls on Students' Study Habits	60,030
State Board of Education, Salem	A Special Training Project for Planning Proposals and Evaluating Research	9,016
State System of Higher Education, Monmouth	Two Types of Teacher-Learner Interaction in Learning by Discovery	20,230
State System of Higher Education	Development of Films and Other Materials for Use in Elementary Teacher Education	42,911
State System of Higher Education	Programmatic Support for the Development of Research Capacity	50,000
University of Oregon, Eugene	Center for the Advanced Study of Educational Administration	663,186
University of Oregon	The Social Context of School Organization and Educational Administration (ERIC Clearinghouse)	90,365
University of Oregon	Issues and Problems in Contemporary Educational Administration	56,233
University of Oregon	Postdoctoral Research Training Program	91,500
University of Oregon	Program Development (Research Training)	17,393
University of Oregon	Undergraduate Program for Research Training in Educational Administration	18,000
University of Oregon	Graduate Research Training Program in Educational Administration	72,000

---

---

OREGON cont'd.

University of Oregon	Characteristics of Selected Secondary School Independent Study Programs	5,674
University of Oregon	A Study of the Impact of Teacher Training on Student Values	8,470
University of Oregon	Effects of Educational Innovations for the Culturally Deprived on Citizen Support for the Schools	51,001
University of Oregon	A Collative Report on Architectural Recommendations for Secondary (and Tertiary) School Theatre Space and Equipment	7,459
University of Oregon	A Sequential Curriculum in Language, Reading, and Composition (Oral and Written), Grades 7 Through 12	103,843
University of Oregon	Educational Innovations in the Community	6,403

PENNSYLVANIA
3,490,919

American Institutes for Research in Behavioral Sciences, Pittsburgh	Program for Training in the Computer, and Multivariate Applications to Educational Research	30,000
American Institutes for Research in Behavioral Sciences	Attitude Change Procedures Suggested by Contrast and Assimilation Phenomena	9,000
American Institutes for Research in Behavioral Sciences	Study of Effects of Participation in a Public Affairs Adult Educational Program: A Developmental Study	7,878

---

---

**PENNSYLVANIA cont'd.**

American Institutes for Research in Behavioral Sciences	Project Talent Five-Year Followup Studies	447,754
American Institutes for Research in Behavioral Sciences	The Development of Research Techniques for Determining the Effectiveness of Scientific and Technical Exhibits	60,404
Bucknell University, Lewisburg	Development of an Internship and a Computer-Based Research Program as an Integral Part of a Graduate Program in Educational Research	19,980
Bucknell University	A 2-Year Graduate Program To Prepare Master's Degree Candidates for Research on the "Teaching-Learning" Process	72,000
Bucknell University	Studying Learning Patterns of Mental Retardates	22,303
Carnegie Institute of Technology, Pittsburgh	Interracial Theatre for Mass Society in the United States from 1956-66: A Description and Analysis	6,450
Carnegie Institute of Technology	Analysis, Evaluation, and Revision of Existing Materials for an Advanced Placement English Course	6,580
Carnegie Institute of Technology	Feasibility Study on Combining a Community Theatre With a College Drama Department	4,993
Carnegie Institute of Technology	An Audiovisual Component to a High School Social Studies Curriculum for Able Students	25,606

---

---

**PENNSYLVANIA cont'd.**

Carnegie Institute of Technology	A High School Curriculum in the Fine Arts for Able Students	60,830
Carnegie Institute of Technology	Individual Differences in the Problem Solving Process of College Students	6,745
Carnegie Institute of Technology	Uses of Symmetry in Design Education	35,089
Carnegie Institute of Technology	A High School Social Studies Curriculum for Able Students	51,780
Carnegie Institute of Technology	A Program To Extend Curriculum Materials in English for the Able to a Wider Student Group	13,633
Carnegie Institute of Technology	The Development of a Sequential and Cumulative Program in English for Able College-Bound Students in the Senior High School, Grades 10-12	22,979
Department of Public Instruction, Harrisburg	The Development of an Information System for Elementary School Mathematics Curriculum Materials: A Feasibility Study	9,750
Department of Public Instruction	Effects of Student Reactions to Teaching Methods	44,518
Department of Public Instruction	Factors Affecting Learning To Read	28,298
Haverford College	An Intermediate College Course in Perception and Judgment Designed To Increase the Range and Intensity of Student Participation	348

---



---

**PENNSYLVANIA cont'd.**

Haverford College	The Effects of the Freshman Year of College on the Development of Good Citizenship	900
Kutztown State College	Legal Certification Requirements To Teach and Supervise Art in the Public Schools of the Fifty States and the District of Columbia	7,375
Lehigh University, Bethlehem	Cooperative Graduate Program for Training in Educational Research	72,000
Lehigh University	Program Development for Cooperative Graduate Program for Training in Educational Research	16,217
Pennsylvania State University, University Park	The Preparation of Youth for Effective Occupational Utilization	131,915
Pennsylvania State University	Educational Research Specialist Traineeships in Educational Psychology	36,000
Pennsylvania State University	Program Development for Research in Physical Education, and Graduate Research Training Program in Physical Education	63,000
Pennsylvania State University	The Effects of Different Methods of Verbal Training in Improving Children's Ability in Problem-Solving	6,312
Pennsylvania State University	Mathematics Teaching Behavior Changes Made by Intermediate Grade Teachers During a Fifteen-Week Period of Instruction by Educational Television	37,197

---

---

**PENNSYLVANIA cont'd.**

Pennsylvania State University	Selected Psychological Concepts as Applied to the Teaching of Drawing	25,080
Pennsylvania State University	Development of a Technique for Identifying Elementary School Children's Musical Concepts	23,942
Pennsylvania State University	Dissemination of Some Results of the Seminar on Research and Curriculum Development in Art Education	3,177
Pennsylvania State University	Attitude Change and Subsequent Behavior	4,684
Pennsylvania State University	Development of Two Standardized Measures of Hearing for Speech by Children	15,048
Pennsylvania State University	Education and Marginality in the Communal Society of the Hutterites	5,391
Pennsylvania State University	A Seminar in Art Education for Research and Curriculum Development	44,511
Research for Better Schools, Inc., Philadelphia	A Conceptual Study for a Regional Research Laboratory	96,754
Research for Better Schools, Inc.	Establishment of an Operational Educational Laboratory	466,447 <sup>3</sup>
St. Joseph's College, Philadelphia	Determining Excellence Quotient for Liberal Arts College Libraries	6,420

---

<sup>3</sup> Amount includes funds for construction of and/or equipment for facilities for educational research.

---

---

**PENNSYLVANIA cont'd.**

Temple University, Philadelphia	Educational Achievement and Life Styles in a Traditional Society (Old Order Amish)	39,400
Temple University	Effects of an Enrichment Program on Six-Year-Old Children	9,000
Temple University	A School-University Program for Recruiting and Preparing Teachers for the Inner-City Elementary Schools of Philadelphia, Pennsylvania	70,084
Temple University	The Effect Upon the Behavior and Attitudes of Student Teachers of Training Cooperating Teachers and Student Teachers in the Use of Inter- action Analysis as a Classroom Obser- vational Technique	65,276
University of Pennsylvania, Philadelphia	Graduate Training in Mathematics Educational Research	18,000
University of Pennsylvania	Doctoral Training Program in Test Development, Evaluation, and Re- search Techniques	55,300
University of Pennsylvania	Comparing Two Methods of Teaching Reading	22,132
University of Pennsylvania	Identification and Measurement of Reading Comprehension Skills of High School Students	24,586
University of Pennsylvania	A Comprehensive Graded Curriculum in Dance Training for Secondary Schools	67,852

---

---

**PENNSYLVANIA cont'd.**

University of Pennsylvania	The Use of Programed Instruction in the Development of Recognition Skills	2,241
University of Pittsburgh	Graphic Sources for the Teaching of Restoration Acting Style	4,447
University of Pittsburgh	Program for Specialists in Educational Research	60,000
University of Pittsburgh	University of Pittsburgh Educational Research Doctoral Program Development	41,765
University of Pittsburgh	The Relationship of Poverty to Educational Deprivation	35,844
University of Pittsburgh	A Measurement of College Instructor Behavior	7,117
University of Pittsburgh	Two Approaches to Reading Instruction	25,000
University of Pittsburgh	A System for Retrieving Theatre Materials	9,000
University of Pittsburgh	Vocalism in Silent Reading	27,528
University of Pittsburgh	School Achievement and Effect of Type Size on Reading in Visually Handicapped Children	3,101
University of Pittsburgh	Project Talent Data Analysis and Followup Studies	50,465
University of Pittsburgh	The Relationship of Creativity to Social Class	2,212

---

PENNSYLVANIA cont'd.

University of Pittsburgh	Comprehensive Informal Education for Adolescents: The Gadna Program	10,718
University of Pittsburgh	Research and Development Center for Learning and Instructional Practice	783,094 <sup>3</sup>
York Junior College	Effectiveness of an Interest-Motivated Approach to Junior College Remedial English Instruction	7,469

RHODE ISLAND

Providence College	Computer-Assisted Instruction for the Mentally Handicapped	5,382
--------------------	--	-------

SOUTH CAROLINA

University of South Carolina, Columbia	Graduate Educational Research Training Program	89,625
--	--	--------

SOUTH DAKOTA

Dakota Wesleyan University, Mitchell	Educational Research Training Program	10,000
--------------------------------------	---------------------------------------	--------

TENNESSEE

George Peabody College for Teachers, Nashville	Educational Deprivation in Young Children: Analysis and Program Development	75,000
--	---	--------

---

<sup>3</sup> Amount includes funds for construction of and/or equipment for facilities for educational research.

---

TENNESSEE cont'd.

George Peabody College for Teachers	Doctoral Training and Development for Educational Psychologists (Research Training)	48,960
George Peabody College for Teachers	An Investigation of Marking Practices of Secondary School Teachers	4,355
George Peabody College for Teachers	Development of a Visual-Verbal Measure of General Creativity	3,758
George Peabody College for Teachers	Remedial Information in Teaching Con- cepts and Principles	8,200
Lane College, Jackson	Programmatic Support for the Develop- ment of Research Capacity	50,000
Le Moyne College, Memphis	The Speech of Negro High School Students in Memphis, Tennessee	13,618
Memphis State University	Mid-South Undergraduate Training and Development Program (Research Training)	20,000
University of Tennessee, Knoxville	Graduate Research Training Program in Education, Behavioral Sciences, and Social Sciences	120,000
University of Tennessee	A Suggested Method for Preschool Iden- tification of Reading Disability	7,430
University of Tennessee	Administrative Patterns Operative in Public School Health Programs	6,722
Vanderbilt University, Nashville	The Effects of College Environment on Students' Decisions To Attend Graduate School	19,434
Vanderbilt University	Effects of Word-Relatedness of Learning	16,604

---

<b>TEXAS</b>		<b><u>1,425,287</u></b>
East Texas State University, Commerce	A Bibliography of English and American Literature Dissertations Accepted by American, British, and German Universities, 1864-1964	3,934
North Texas State University, Denton	Research Institute for Public School Curriculum Personnel	53,568
North Texas State University	Cooperative Educational Research Training Program	29,700
North Texas State University	Oral Language Development of Children Experiencing and Not Experiencing Project Head Start Activities	7,584
Southern Methodist University, Dallas	Research Specialists in Reading (Research Training)	104,600
Southwest Educational Development Corporation, Austin	The Development of a Regional Educational Laboratory	216,349
Southwest Texas State College, San Marcos	Educational Programing for Pupils With Neurologically Based Language Disorders	62,498
Texas A & M University, College Station	Statistical Methodology for Educational Research	64,600
Texas Christian University, Fort Worth	Peer Group Maladjustment in Childhood and Personality Development	15,841
Texas Christian University	A Taxonomic Investigation of Personality	19,572

---

---

TEXAS cont'd.

Texas Christian University	Integration of Stimulus Cues by Normal and Mentally Retarded Children	28,750
University of Houston	Modern Mathematics--A Problem in Professional Retraining	9,000
University of Houston	School Plant Research and Planning Information Abstract Service	9,000
University of Texas, Austin	Personality, Teacher Education, and Teaching Behavior	50,170
University of Texas	Development of Inter-American Test Materials	14,652
University of Texas	An Analysis of Causes of Anxiety Among Children in School	29,078
University of Texas	Multidisciplinary Graduate Program for Preparation of Educational Research Specialists	120,000
University of Texas	An Exploratory Study of the Effectiveness of a Technique for Teaching Certain Concepts of Speech Composition	8,828
University of Texas	Development of Guidelines and Resource Materials on Latin America for Use in Grades 1-12	32,324
University of Texas	Sensory Development and Concept Formation in Early Childhood	5,678
University of Texas	A Study of Two First-Grade Programs for Culturally Deprived Mexican-American Children	9,000

---



---

**TEXAS cont'd.**

University of Texas	The Relationship of Attitudes Among Student Teachers, College Supervisors, and Cooperative Teachers	6,715
University of Texas	Perceptions by Counselors of Various Procedural Approaches in Initial Counselors' Sessions	22,828
University of Texas and Houston Public Schools	The Development of New Supplementary Teaching Materials and an Analysis of Their Potential Use in the High School Biology Curriculum	8,033
University of Texas	A Study To Explore New Methods of Identifying and Measuring Musical Talent	5,160
University of Texas	Factors Involved in Determining the Relationship Between Teachers' and Pupils' Attitudes	9,000
University of Texas	Research and Development Center in Teacher Education	459,175
University of Texas	The Role of Spatial Abilities in the Performance of Certain Motor Skills	3,994
University of Texas	Anxiety Related to School Adjustment and Academic Achievement Among High School Males	8,172
University of Texas (Texas Western College), El Paso	An Evaluation of the Effectiveness of Mnemonic Devices as Aids to Study	7,484

---

<u>UTAH</u>		<u>89,805</u>
Garfield County School District, Panguitch	A Pilot Study To Determine the Influence Upon Teachers and Upon Students of a TV Program Designed To Provide Inservice Training and Classroom Instruction in Spanish	7,337
State Board of Education, Salt Lake City	Regional Training Workshop on Research in Vocational and Technical Education	12,187
University of Utah, Salt Lake City	Evaluative Teaching Strategies in the Social Studies	8,770
University of Utah	Relationships Between Teacher Characteristics and Student Behavior, Part III	20,796
University of Utah	Sequence Characteristics of Text Materials and Transfer of Learning	10,024
University of Utah	The Influence of Parental Attitudes and Child-Parent Relationships Upon Remedial Reading Progress	7,132
Utah State University, Logan	Characteristics of Freshman College Students in Need of and Receptive to Counseling	4,524
Utah State University	Development Aspects of Concepts Attainment	1,062
Utah State University	Drinking and Student Understanding of Alcohol and Alcoholism in Selected High Schools of Utah	4,830
Utah State University	Personality Factors Which Influence Clothing Fabric Selections By Delinquent Girls	5,659

---

UTAH cont'd.

Utah State University	Personality Characteristics of School Superintendents in Relation to Their Willingness To Accept Innovation in Education	7,484
-----------------------	--	-------

VERMONT58,271

Johnson State College	Comparison of Two Methods of Reading Instruction at First-Grade Level: Individualized Reading Versus the Basal Reader Program in Rural Communities	52,576
-----------------------	--	--------

University of Vermont, Burlington	The Development of Facility in Mathematical Exposition	5,695
-----------------------------------	--	-------

VIRGINIA136,825

Counsel for National Art Education Association, Alexandria	International Leadership Conference in Art Education	1,000
--	--	-------

Hollins College	Subvocal Speech During Silent Reading	9,258
-----------------	---------------------------------------	-------

Marymount College, Arlington	Programmatic Support for the Development of Research Capacity (To Develop a Research Formula for Identification of Basic Purposes of General Education)	50,000
------------------------------	---	--------

University of Virginia, Charlottesville	Use of the Computer To Generate Statistical Tables for the Study of Personality Traits	7,380
---	--	-------

University of Virginia	Teaching Upper Elementary School Science with Programed Materials and Student-Performed Experiments	42,633
------------------------	---	--------

---

---

VIRGINIA cont'd.

Virginia Polytechnic Institute, Blacksburg	A Planned Survey Course in British Commonwealth Literature for American Students	5,728
Washington and Lee University, Lexington	An Advanced Chemistry Laboratory Program	4,346
Washington and Lee University	The Development of Laboratory Procedures for a Course in Elementary Quantitative Chemistry on a Freshman Level, With Some Emphasis on Instrumental Methods of Analysis	6,480
Washington and Lee University	Undergraduate Research in Natural Sciences, Social Sciences, and Humanities	10,000

WASHINGTON233,789

Central Washington State College, Ellensburg	Educational Research and Training Institute	38,314
Clark College, Vancouver	A Survey To Determine Needed Changes in the Teaching of the Social Sciences and Humanities to Nontransfer Students at Community Junior Colleges	3,396
Eastern Washington State College, Cheney	Instruction in Inter-American Relations in Medium and Smaller State Colleges and Universities in Western United States and Mexico	9,000
Eastern Washington State College	Development and Trial of a Basic Course in Music Theory Using Self-Instructional Materials To Supplement Training Received in High School Performance Groups	25,179

---

---

WASHINGTON cont'd.

State Department of Public Instruction, Olympia	Effects of Reduced Loads and Intensive Inservice Training Upon the Classroom Behavior of Beginning Elementary Teachers	52,706
State Department of Public Instruction	A Study of Protrusional Lisps To Identify Children Requiring Speech Therapy	13,820
University of Washington, Seattle	Demographic and Ecological Analysis of College Student Migration	28,953
University of Washington	A Research Study To Seek New Theatre Arts Material in European Countries and To Develop These Materials for Use in Theatre Education at the Elementary and Teacher Training Levels	7,955
University of Washington	A Study of the Conditions of "Depend- ence" and "Independence" With Reference to the Adolescent Peer Culture in the American Secondary School	6,921
Washington State University, Pullman	Development of Tests for Evaluating Group Counseling in a Teacher- Education Program	7,487
Washington State University	Educational Aspirations of Farm Boys and Girls	19,994
Western Washington State College, Bellingham	A Longitudinal Study of the Effective- ness of Children's Experimentation and Learning of Selected Physics Principles	19,404
Western Washington State College	Independent Study at the College Level	660

---

---

<b><u>WEST VIRGINIA</u></b>		<b><u>593,943</u></b>
Appalachia Educational Laboratory, Charleston	Appalachia Educational Laboratory (Program Operation)	378,650 <sup>3</sup>
West Virginia University, Morgantown	Appalachia Region Educational Laboratory (Development Contract)	141,318
West Virginia University	Special Research Training Program for Public School Personnel	59,227
West Virginia University	Characteristics of High School Seniors Related to Subsequent College Attendance	14,748
<b><u>WISCONSIN</u></b>		<b><u>2,028,509</u></b>
Hamilton High School, Sussex	An Exploratory Study in Teaching World History in German	6,893
Monona Public Schools and State Department of Public Instruction	The Development and Implementation of a Four-Year Integrated, Concept-Centered Science Curriculum for Secondary Schools	9,915
St. Norbert College, West De Pere	Teaching Process as a Learning Experience	17,203
State Department of Public Instruction, Madison	A Sequential English Language Arts Curriculum in Linguistics, Logic, Semantics, Rhetoric, Composition and Literary Analysis and Criticism for Grades K-12	49,940
University of Wisconsin, Madison	Factors Influencing Learning and Problem-Solving Behavior in the Mentally Retarded	19,176

---

<sup>3</sup> Amount includes funds for construction of and/or equipment for facilities for educational research.

---

---

**WISCONSIN cont'd.**

University of Wisconsin	Relationship Between the Perception of the Locus of Administrative Decisions and Instructional Change	25,238
University of Wisconsin	Elementary School Teachers' "Viewpoint of Teaching as Influenced by Classroom Organization"	39,886
University of Wisconsin	Promising Practices in the Education of Superior Students: A Demonstration Program	45,846
University of Wisconsin	The School Board as an Agency for Resolving Conflict	34,350
University of Wisconsin	Long-Term Study of Educational Effectiveness of Newly Formed Centralized School Districts in Rural Areas, Part II	1,583
University of Wisconsin	Benefits of Research Design: A Pilot Study	70,897
University of Wisconsin	Center for Research and Development for Learning and Reeducation	808,081
University of Wisconsin	Auditory Perception of Musical Sounds by Children in the First Six Grades	3,556
University of Wisconsin	Strategies and Cognitive Processes in Concept Learning	27,368
University of Wisconsin	Methodology for Determining Future Physical Facility Requirements for Institutions of Higher Education	63,288

---

---

WISCONSIN cont'd.

University of Wisconsin	Work Orientation, College Performance, and Occupation Choice	57,096
University of Wisconsin	Institute for Preparation of Central Office Research Specialists for Public and Private Schools	112,000
University of Wisconsin	Science and Mathematics Education Research Training Program	60,000
University of Wisconsin	Training Program for Directors of Educational Research	16,848
University of Wisconsin	Postdoctoral Training in Educational Research and Development	50,400
University of Wisconsin	School Administrators Institute for Educational Research	64,530
University of Wisconsin	Determination of Concepts Basic to an Improved Foods Nutrition Curriculum at the College Level	33,840
University of Wisconsin	Size Factors and Non-Dollar Costs of Secondary Schools, Phase I	76,007
University of Wisconsin	The Evaluation of the Current Status of Cooperative and Exchange Programs and Their Implications for Title III of the Higher Education Act of 1965	49,700
University of Wisconsin	The Identification and Examination of Areas of Needed Research in School Librarianship	7,494
University of Wisconsin	The Role of Stimulus Structure in the Perception of Briefly Exposed Visual Stimuli	13,668

---



---

**WISCONSIN cont'd.**

University of Wisconsin	Taiwanese Education under Japanese Rule (1895-1945): Japanese Policies and the Reaction of Taiwanese Intellectuals	5,461
University of Wisconsin	Effects of Certain Teacher Behaviors Upon Thinking in a First-Grade Classroom	8,188
University of Wisconsin	A Comparative Study of General Art Offerings in University of Wisconsin Extension Centers, State Universities, and Vocational Schools	8,712
University of Wisconsin	Relationship Between Teacher Practice and Knowledge of Reading Theory in Selected Grade School Classes	8,879
University of Wisconsin	A Study of Different Cultural Values Held for Physical Activity	8,949
University of Wisconsin	An Investigation of Observer-Judge Ratings of Teacher Competence	3,155
University of Wisconsin	Transfer Effects of Training Intermediate Grade Pupils To Adjust Reading Speed to Reading Purpose	27,665
University of Wisconsin	A Computer Analysis of Fictional Prose Style	42,306
University of Wisconsin	Observation of Intern Teaching as a Technique To Improve Teaching Methods Used by the Observer	8,413

---

---

WISCONSIN cont'd.

University of Wisconsin	Completion of Collecting and Preparation for Editing a Dictionary of American Regional English	74,400
University of Wisconsin	Some Determinants and Consequences of the Teacher's Perception of Causation	1,759
Wisconsin State University, Oshkosh	The Development of a Planned Program for Teaching the High School Choral Class	8,625
Wisconsin State University, River Falls	An Experiment To Improve the Reasoning Ability of Seventh Graders	7,193
Wisconsin State University, Stevens Point	Programmatic Support for the Development of Research Capacity	50,000

WYOMING

University of Wyoming, Laramie	Conservation Education Improvement Project	<u>39,760</u> 16,906
Wyoming State Department of Education, Cheyenne	Identification in the Kindergarten of Factors That Make for Future Success in Reading, and Identification and Diagnosis in the Kindergarten of Potential Reading Disability Cases	22,854

PUERTO RICO

University of Puerto Rico, Rio Piedras	Standardization of a Spanish Language Adult Intelligence Scale	<u>107,393</u> 33,613
--	--	--------------------------

---

---

PUERTO RICO cont'd.

University of Puerto Rico	Motivational Factors Influencing Academic Achievement of Eleventh-Grade Puerto Rican High School Students	26,921
University of Puerto Rico	The Teaching Profession in Puerto Rico: Attitudes and Motivations of Public School Teachers	46,859
<u>Grand Total</u>		<u>50,857,380<sup>4</sup></u>

---

<sup>4</sup>Includes support for a \$6,500 project entitled "An Attempt To Find Acceptable Objective Bases for Ethical Judgments, With Special Reference to Education," with Cambridge University England, as contracting agency.

---