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Federally Funded Research In Librarianship

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A DISCUSSION OF the impact of federally funded research in librarianship should begin with an attempt to define or establish parameters for the terms employed. If this discussion were limited to those research activities funded exclusively by the federal government, the conclusions, remarks and recommendations (if any) could be contained in two or three paragraphs. However, very few projects have been supported solely by federal funds. In most instances, projects receive multiple sources of funding, either from local, or other private, municipal, or state sources—and perhaps this is as it should be. Another limiting factor is related to the intent of the legislation which might provide financial resources. Many sources of funding within the fęderal government—the National Science Foundation, the Department of Defense, the Department of Health, Education, and Welfare (National Library of Medicine, Office of Education, and National Institute of Education), etc.—are available to support research for library-related activities. In addition to considering these sources as granting agencies, it must be remembered that considerable sums of money have been spent within the federal agencies themselves for research and development in the areas of library and information science—the MARC project (machine readable cataloging) at the Library of Congress, the MEDLARS project (medical literature analysis and retrieval service) at the National Library of Medicine, the TISA project (technical information support activities) of the Army Corps of Engineers, etc.

Government sponsorship of research is generally mission oriented. It is unrealistic to expect the National Library of Medicine, in its administration of the Public Health Service Act, to support in any way an investigation of problems not directly related to some aspect of medical librarianship or information service. The only existing federal

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legislation intended to serve any and all concerns for library research is that which exists under Title II-B of the amended Higher Education Act of 1965. The intent of this legislation is to improve the practice of library and information science. The program actually avoids funding projects which may conflict with other existing legislation, and this occurs primarily because of limited resources. The following discussion is concerned primarily with the research program as administered by the Office of Education—the Higher Education Act (HEA) Title II-B.

Although the term "research" seems to be well understood and the meaning apparent to all concerned, it is obvious that some misunderstanding does exist concerning its definition. It is not appropriate here to engage in a philosophical discourse relating to the meaning and implications of the term. Much has been written and said on the subject and recounting it all is hardly worth the effort. However, two comments by Jesse Shera cannot pass unnoticed. In two previous issues of *Library Trends,* Shera discusses forthrightly and succinctly the basic concept of "research": "One cannot talk about the philosophy of modern research without going back to Bacon . . . research since (at least) the time of Bacon has been an answering of questions by the accumulation and assimilation of facts which lead to the formulation of generalizations or universals that extend, correct, or verify knowledge."[1] This definition is quite precise and very restrictive, particularly as one might attempt to characterize research activity in the field of librarianship. It is this disparity between the pure sciences and the "science" of librarianship that may lead to another comment by Shera: "'Research' is, of course, a slippery word, and all that masquerades under that title is not properly so."[2] Librarianship as a service-centered discipline tends to produce studies and investigations rather than highly structured research projects.

To further complicate the attempt to define the basic concept of research, a new dimension has been added—demonstration. The program in the Office of Education (HEA II-B) is identified as "Library Research and Demonstration." The concept of a demonstration should not be confused with the demonstration library or demonstration center—indeed a demonstration library may be a part of a research project, but this is not intended to be a limiting factor. For the purposes of this discussion, consider the following as an attempt to clarify: a demonstration is the implementation or operation of a new concept, service or program in an effort to establish a basic premise or hypothesis.

One of the earliest public records of reference to federal support for research in librarianship appears in the *Hearings before the Subcommittee on Education relating to the Higher Education Act.* Edmon Low, as a representative of the American Library Association, submitted testimony to the committee indicating the need and support for the legislation. In his testimony, Low addressed the issues of library resources and library education as well as commenting on research:

> Related to the training is the need for research in the many areas relating to libraries and library activity. We need to know more about why people read, what they read, and how to make our libraries even more effective instruments in our community life. We need to study better ways of controlling the great mass of printed materials, the place of machines in library work and documentation, and the storage and preservation of materials economically in miniature reproduction on a scale not now known. We must do these things if we are to keep abreast of the demands to be made on us in the years ahead.[3]

It is interesting to note that the concept of research was related to training. It was during this same period that a new interest was smoldering in the schools of librarianship. A new impetus was generated toward the inclusion of doctoral programs and, with the advent of the newly created institutes of research, the increase in the number of doctoral candidates produced more individuals interested in and actively engaged in research.

Ever since the impact of World War II, and the advent of post-Sputnik technology, the federal government has become the largest single source of research sponsorship. It is not surprising, then, that the sponsorship of library research should also be under the direction of the federal dollar. The Higher Education Act was one of the earliest laws to incorporate this concept even though a few federal agencies had legislation which addressed the problems of information handling.

In 1956 the U.S. Air Force Office of Aerospace Research established the Directorate of Information Sciences. This program was designed to serve two requirements of the Air Force: (1) to improve the handling of scientific and technical information in Air Force libraries and information centers; and (2) to serve Air Force technical objectives in applied areas such as electromagnetic intelligence, ground communications, reconnaissance and aerospace photography, optronics, etc.[4] This program was terminated early in the 1970s.

The National Science Foundation is authorized and directed, in addition to other responsibilities, to foster the interchange of scientific information between U.S. and foreign scientists, to coordinate national scientific information activities, and to provide or arrange for the provision of indexing, abstracting, translating, and other services leading to more effective dissemination of scientific information. In 1958 the Office of Science Information Service (OSIS) was established to support research, development and demonstration projects designed to improve scientific and technological information services. The OSIS program is organized around five priorities: research, economics of information transfer, user support, information systems, and foreign science activities.[5]

In 1963, the Department of Defense (DOD) assigned the functions of the Scientific and Technical Information program for DOD. Two years later the instruction was implemented, and the office of the Chief of Engineers was assigned responsibility for the management of the Army Technical Library Improvement Studies (ATLIS) project, later to be expanded and called Technical Information Support Activities (TISA). The basic objective of the ATLIS program was to improve the flow of technical information into, through, and from the Department of the Army in order to avoid unnecessary duplication of effort in research, development, testing and evaluation, while reducing lead time and assuming operation at the most economical level.[6] A recent publication by the American Society for Information Science is a collection of papers sponsored by the TISA project, which covers such topics as management, performance measures, networking, etc.[7] Even though the topics originated within the context of DOD, the major findings and conclusions can be generalized to most scientific and technical libraries.

The Public Health Service Act, Title III, provides two objectives of interest to the information community. The first provides grants for biomedical communication research (sections 390(b)4 and 395) to assist in the processing and disseminating of health information through support of projects for research, development and demonstrations in medical library science, techniques, systems and equipment. The other portion of the act, administered by the National Library of Medicine, concerns the development of a national system of regional medical libraries to disseminate information to health sciences personnel, particularily those who are far from major centers (sections 390(b)(6) and 397).[8]

In the Office of Education the Library and Information Science

Research Program was authorized in 1965 under the Higher Education Act; however, authorization was not issued for funding until fiscal year (FY) 1967 at $3.5 million. During the first three years of operation, the program was administered by the Division of Information Technology and Dissemination, Bureau of Research (later to become the National Center for Educational Research and Development). In June 1970, the program was transferred to the Division of Library Programs in the newly created Bureau of Libraries and Educational Technology, and the Research and Program Development Branch was created. It does not seem appropriate to attempt to trace the organizational changes in the Office of Education, other than to note that as of January 1975 the program's title is "Library Research and Demonstration Program" and is located in the Office of Libraries and Learning Resources, Bureau of School Systems.

During the beginning years of the program, the general emphasis of funded projects was hardware oriented. Projects were funded to provide computer applications to library functions, to develop hardware such as low-cost microfiche readers, and to develop library organization and management. The program underwent a major redirection in FY 1972. At that time, Commissioner of Education Marland announced in his objectives for the Office of Education the following priorities: (1) education of the handicapped; (2) innovation and pluralism in education; (3) elimination of racial, ethnic and cultural barriers to educational opportunities; (4) career education development; and (5) education of the handicapped.[9]

In response to these concerns, the library research program was directed toward social issues in an attempt to determine the needs and requirements of Americans who may not have access to adequate library and informational services, and to mobilize total community resources to improve the quality of life for the general public. Projects were funded to study the information needs of a variety of target groups: residents of the inner-city, the aging, the institutionalized, rural residents, ethnic groups, the disadvantaged, etc. Along with these basic studies, attempts were made to develop model information services (as demonstrations) for the target populations with the ultimate goal of replicating the services in other localities.

It was during this period that the concept of the "community learning center" came into prominence. The choice of terminology is apparently not the best—the word *learning* implies an emphasis on education which may not necessarily be true. It is not clear how to describe this new service in the community. Some may argue that there

are at least two concepts to be addressed: (1) a service to support a diversity of educational needs, and (2) a community information service. It only complicates the problem to try to separate these requirements. Elements of both concepts exist—it appears to be only a matter of degree or emphasis.

The fact remains that in the present day of changing societal needs, a service might exist which can respond to the needs of the residents—poor, rural, urban, ethnic groups, disadvantaged, etc.—in nearly every community. Elements of such a service exist today—the public library may provide some of the services and the social and welfare agencies may provide others—but somewhere in between there is a requirement which may very well suggest a new entity. This service would not replace the public or school libraries or the social agencies, but would provide the linkage between the user and the information.

These facilities or their prototypes exist under various identifiers: community learning center, library learning center, neighborhood information center, etc. The label is of little consequence; the real importance is reflected in the fact that those communities which now operate this kind of service have done it primarily because of community response and the role of local community leadership in their operation.

One of the very serious problems encountered in an attempt to establish these services in a community is the difficulty in consolidating resources, or the preservation of self-serving enterprise. For example, in programs suggesting that a consolidation of public and school libraries take place, considerable resistance is often encountered by one or the other of the groups to preserve the image of the original establishment.

In addition to the support provided under the HEA, there was another means of funding research activities within the Office of Education. The record through the years refers to the program as the "Small Grants Program," "Regional Research Program," or "Mini Grants." Essentially, the program limited grants for support to under $10,000. Grants could be awarded to colleges, universities, state departments of education, or to other public or private agencies, organizations, groups or individuals with institutional or organizational sponsorship.

The implementation of this small project research appears to have been fostered by the concept of the National Defense Education Act of 1958, Title VII-A, Research and Experimentation. The legislation

provided an opportunity to obtain contracts or grants up to $5,000 to "conduct, assist, and foster research and experimentation in the development and evaluation of projects involving television, radio, motion pictures, printed and published materials, and related media of communication which may prove of value to State or local educational agencies."[10] The basic concept of the small research projects emerged in the Cooperative Research Act during FY 1962. The level of funding was increased and small grants could then be awarded at the $10,000 level. In FY 1965 the program was regionalized. The selection of applications for funding and the administration of the projects was the responsibility of the U.S.O.E. regional offices. In August 1973 the Small Grants Research Program was terminated and nothing of a comparable nature exists to take its place. It was then that the National Institute of Education (NIE) was established.

The Education Amendments of 1972 provide the legislative authority for NIE, and the objectives of the organization are: "To improve education, so that every person is provided an equal opportunity to rēceive an education of high quality, through: helping to solve or to alleviate the problems of, and achieve the objectives of American education; advancing the practice of education as an art, science, and profession; strengthening the scientific and technological foundations of education; and building an effective educational research and development system."[11]

The library research program, in the Office of Education, has been operational under the HEA for eight years. During this time 221 projects have been funded. Table 1 provides a summary of the program obligations as well as the total number of projects funded for the period FY 1967 through FY 1974.

The organizations which conducted research during this period include the academic community, nonprofit organizations, profit organizations, public libraries, government agencies, local school districts, and state and municipal governments. Over 50 percent of the projects were conducted in the academic community, 25 percent in the nonprofit organizations, and the remainder nearly equally divided among the representative sponsors.

The subject emphases of the projects can be grouped in five categories: (1) institutional cooperation to serve special target groups (projects involving the development of specialized library services including the public library, school library and social and welfare agencies in the community); (2) technology (automatic data processing, micromedia, etc.); (3) functional development (reader services,

TABLE 1

LIBRARY RESEARCH AND DEMONSTRATION PROGRAM
HEA II-B
TOTAL OBLIGATIONS AND NUMBER OF PROJECTS FUNDED

Fiscal Year	Obligation	Number of Projects
1967	$3,381,052	38
1968	2,020,942	21
1969	2,986,264	39
1970	2,160,622	30
1971	2,170,274	18
1972	2,748,953	31
1973	1,784,741	24
1974	1,418,433	20
Total	$18,671,281	221

processing, acquisitions, cataloging and classification, etc.); (4) planning and development (feasibility studies, etc.); and (5) education and training (library education curriculum development, etc.).

A variety of attempts have been made to identify research in progress and to report completed research. The publication of the National Science Foundation (NSF), *Current Research and Development in Scientific Documentation (CRDSD)*, was perhaps the most comprehensive effort to identify the results of research and development in information handling problems. Although the emphasis was on scientific documentation, such examples as "Effectiveness of Public Library Services: Indices of Measurement and their Relation to Financial Support"[12] indicates that the included entries were not exclusively scientific documentation. The first issue of this publication appeared in 1958 and the final issue was published in 1966.

In October 1959, the Library Services Branch in the U.S. Office of Education (U.S.O.E.) produced the first issue of *Library Research in Progress (LiRiP)*. This service was designed to serve as a clearinghouse for new developments in the field. During the five-year period of publication, 902 projects were reported. A tabulation appearing in the final issue includes a breakdown by type of contributor: degree candidates far outnumbered the others, accounting for 42 percent of the work; the next highest number was represented by library school faculty members at 10 percent. Although *LiRiP* did not generally include a dollar figure for the projects reported, the final issue includes a table which reports the financial support for library research. The

total support reported for the five-year period was $8,730,036. Just over 50 percent of this amount was attributed to support by the federal government. NSF was the largest contributor, and U.S.O.E. was the second largest contributor.

Research in Education (RIE), a publication of the National Institute of Education Educational Resources Information Center (ERIC), for all practical purposes provides an ongoing indexing and abstracting service for the educational community, which includes library and information science interests. The entries in *RIE* include the most complete data of any information service available today for research projects underway or completed. The abstract may be the weakest element of the reporting inasmuch as the abstract reports only for the funding period being covered. If a project has been operational for a period of years, the abstract will seldom report on previous activity. The first issue of *RIE* appeared in 1966; it continues on a monthly basis with semi-annual and annual cumulations.

Another publication which has made a recent appearance is *Library and Information Services Today (LIST)*, a commercial publication with its fourth volume appearing in 1974. The subject arrangement of *LIST* provides access to the projects reported; the 1974 volume claims to include details for 1,362 projects, including foreign programs. One of the indexes attempts to list the projects by sponsorship. These entries are mixed and confused—some projects are listed under program title and some under organizational component, but with complete disregard for actual organizational structure.

There is not a service in existence today which identifies research in progress in the field of library and information science. The field has only fragments which address the research issue by inclusion of the literature resulting from research in such publications as *Library and Information Science Abstracts, Information Science Abstracts, Library Literature* and *Research in Education.*

Through the years the American Library Association has attempted to identify research activity. None of its efforts has ever reached the point of publication or of ready access by the public. The Science Information Exchange of the Smithsonian Institution is the only operative model one might consider to be the kind of service desirable.

A discussion of any program almost certainly brings one to the point of asking: Was it worth it? Was it worth the $18 million the Office of Education invested in the 221 projects with the idea of improving librarianship? The answer to the question is not unlike the well worn comedy routine: "How is your wife?" with the reply "Compared to

what?" What basis of comparison can be employed to make a value judgment? Who can pass judgment and say that investment of money in one project was better than investment in another project? This kind of comparison and evaluation is not unlike the same kind of criticism one hears in a discussion of the aerospace program. How do we know, at this time, what lessons have been learned from our adventure in space? Can we evaluate in a realistic manner those projects taken from the files of the Library Research and Demonstration Program and mark them as outstanding successes or dismal failures? It is not certain that even time will provide the answers we now seek. Frequently the question is asked: How many persons did a particular project serve? Even this kind of statistical exercise is nearly impossible to answer by the very nature of the program itself.

Money essentially buys time. Many of the projects funded as research and demonstration could have been done without federal support, but it might have taken ten to twenty years longer to get the job done. The Ohio College Library Center (OCLC) is a classic example of this: with the limited resources of any one organization it does not seem likely that OCLC could have progressed to its present operational mode.

Earlier in this discussion, reference was made to the community learning center concept. At least six projects are responding to this idea. Not all of the projects have opened their doors for service. The money provided by the Office of Education was intended to be for planning and development rather than for operational funding. Those services which are presently operational are still too new in their respective communities to attempt to make any sound evaluation or judgment of the effect of their impact on the community. At some point in the future—perhaps five, ten or even fifteen years hence—the effort to obtain a more realistic evaluation of the project will be more appropriate than any current effort.

"Start-up" efforts appear to be popular targets for federal support. The National Science Foundation, in particular, has recorded many examples of supporting programs to the point where they might become self sustaining. Support by NSF to the American Chemical Society and *Biological Abstracts* to automate their services are notable examples.

The Office of Education has also provided funds for the beginning stages of programs or services. The money for the initial work of the National Commission for Libraries and Information Science was provided from HEA funds, as well as some of the support for the publication of the *State-of-the-Art Reviews in Information Science* by the

American Society for Information Sciences. This series is now in its eighth volume and continues to be one of the most comprehensive appraisals of literature in this field.

In the fall of 1970 a project was funded to examine the problems related to interlibrary communications and information networks. The grant was made to the ALA to convene a conference of experts in the field and discuss selected topics on the subject. Some of the critics of this project contend that the state of the art had not yet developed to the point of producing any meaningful results. How can this be proven? Or, can we demonstrate in any way that the project was an overwhelming success? If the project served no other purpose, at least the efforts did provide a benchmark or point of departure against which future judgments might be made. This may be the essential ingredient of all research—the establishment of a point of departure for future action.

For a list of reports which have been produced by projects funded by the Office of Education under HEA Title II-B, Library Research and Demonstration Program, see the Additional References. The list includes only those reports published by commercial publishers. Other reports are available through ERIC and are indexed in *Research in Education.*

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