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Notice of Proposed Rulemaking (NPRM) in CC Docket No. 02-6 FCC 02-8 released on January 25, 2002; *Federal Register*, Vol.67, No.33, Proposed Rules  
FEDERAL COMMUNICATIONS COMMISSION (FCC)  
47 CFR Part 54 [CC Docket No. 02-6, FCC 02-8]  
Schools and Libraries Universal Service Support Mechanism  
67 FR 7327

TO: FCC

FROM: Charles R. McClure, Ph. D. Francis Eppes Professor and Director,  
Information Institute

SUBJECT: Comments: NPRM for CC Docket No. 02-6

We submit the following comments regarding the NPRM, CC Docket No. 02-6. These comments should be considered in future rule making regarding the administration of the E-rate program. The comments offered here are only a summary of more detailed findings and recommendations that resulted from a study *Public Library Internet Services and the Digital Divide* conducted by the Information Use Management and Policy Institute at Florida State University. The study was published by the Chief Officers of State Library Agencies and Funded by the U.S. Institute for Museum and Library Services. The authors of the report are Dr. Charles R. McClure, Francis Eppes Professor and Director of the Institute at Florida State University; Joe Ryan, Senior Research Associate; and John Carlo Bertot, Associate Professor and Associate Director of the Institute at Florida State University.

The study was conducted beginning February 2001 and ended January 31, 2002. The focus of the study was the *Role and Impacts from Selected External Funding Sources* on public libraries and included "E-rate" as one of the key external funding sources. Two print copies of the report are included with this letter as attachments. The report is also available on the Institute's website at: <http://www.ii.fsu.edu/publications.html>. Listed below are a selection of the key findings and recommendations that should be considered in this NPRM.

**E-rate funding is essential to local public library operations, but needs fine-tuning:**

- Simplify the application process. Most library managers found the process overly cumbersome and unnecessarily complicated and unending.
- Increase efforts to get clear and accurate information to the library community. Improve involvement of state libraries, consortia, and library systems to achieve this.

## CHAPTER 1: INTRODUCTION

From 1997-2001, public libraries in the United States made a significant advance in obtaining and deploying network and telecommunications technology. Public libraries, with critical external support, began making delivery on the promise of the Internet to revolutionize the provision of information and services to all people and all types of communities throughout the U.S. These technologies now serve as a basis or core for a range of library services and resources that simply were not available 10 years ago. Many of the innovative network services occurred because of the imaginative and leveraged use of key external funding programs such as the Library Services and Construction Act (LSCA), E-rate, the Bill and Melinda Gates Foundation, and other private, federal, state, and local sources.

This report draws upon a range of data that describe the innovative uses, the manner in which these external funding sources were leveraged, impacts and benefits from the funds, and the ways in which these funding sources contributed to extending public library network services. The report also makes suggestions for how to enhance these programs.

### **Key External Funders Covered**

The deployment of public library Internet services would not have occurred without leveraged external funding from many sources. This report focuses attention on the role of the three principal, national-level, external funders of public library Internet services: Library Services and Technology Act (LSTA),<sup>1</sup> E-rate,<sup>2</sup> and the Bill and Melinda Gates Foundation U.S. Libraries Program (hence forth the Gates Fund).<sup>3</sup>

### ***Library Services and Technology Act (LSTA) Grants to State Library Agencies***

The Library Services and Technology Act (LSTA) was embedded in the Museum and Library Services Act of 1996 (P.L.104-208, H.R. 3610). LSTA, and its earlier versions, the Library Services Act (LSA) and the Library Services and Construction Act (LSCA), have provided the longest running most important federal support of public libraries to date. LSTA's focus is to encourage the use of information technology in libraries and to empower under-served and diverse populations. The Institute of Museum and Library Services (IMLS) administer LSTA.<sup>4</sup> The LSTA Grants to State Library Agencies program, the focus of this study, provided libraries with nearly \$558 million during the period 1998-2001.

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<sup>1</sup> See IMLS. <<http://www.ims.gov/>>.

<sup>2</sup> See E-rate <<http://www.sl.universalservice.org/>>.

<sup>3</sup> See Gates Fund. <<http://www.gatesfoundation.org/libraries/uslibraryprogram/default.htm>>.

<sup>4</sup> IMLS administers a number of programs supporting libraries of all types, museums and library-museum partnerships. Library specific funding administered by IMLS includes: grants to state library agencies, Native American library services grants, Native Hawaiian library services grants, national leadership grants for libraries, and the national award for library service. The focus of this study is one of these programs, the Grants to State Library Agencies and the use of that funding with public libraries (although the funding is also used by other types of libraries).

- Increase public library participation; in particular, adjust library eligibility requirements to participate in internal wiring and network equipment portions of the program.
- Find a way to fund support for libraries who lack the staff, the time, or the technical expertise to successfully complete the application process.
- Participants in the study indicated a need for the E-rate program to allow a different approach, including the application process and criteria, for public libraries than for public schools. Public libraries differ from public schools in areas such as mission, who they serve, hours of operation, and overall funding-related issues. It is inappropriate to treat them equally in the application, review, and award process.

#### **Importance of leveraging E-rate awards for external support**

- E-rate awards were effectively leveraged to obtain other funding sources. A vast number of public libraries were able to obtain and upgrade information technology that would have been unavailable to them without E-rate funding.
- With the assistance of state libraries, funds were leveraged to create an information and technology infrastructure capable of delivering a sustained service rather than a piece of equipment to the public.
- Future E-rate funding needs to be flexibly designed to promote leveraging. A model of this is the LSTA's *Grants to State Library Agencies*.
- Future E-rate procedures need to engage the state libraries as partners to coordinate leveraging and to support programmatic goals to have successful state or national reach.

#### **Support for equipment purchase was not enough**

- Public library managers need greater flexibility in obtaining support for a range of internet and telecommunications equipment from the E-rate program.
- Greater flexibility in administrative procedures for the E-rate program need to be available to rework library technology; collections and their organization; the types of public services offered; public training; promotions of these activities; and to increase staff or change their function and training; and with financing, managing, and the evaluation of the new service.

#### **Coordination with the State Library is essential**

- State library coordination with administering the E-rate program is necessary to influence or nudge funding for public library Internet services in the appropriate directions that support statewide plans.
- Consortia and regional library systems also played significant roles in assisting local libraries apply for and use E-rate monies -- particularly when the State Libraries became overwhelmed.
- Statewide coordination in E-rate application and use of technology is necessary for leveraging external funding and cannot work well without early State library involvement and support for that involvement.

## ACKNOWLEDGEMENTS

The findings presented in this work resulted from a broad range of assistance and involvement by people other than those on the study team. First and foremost we are in the debt of all the librarians and others that met with us during the site visits. Their views, perspectives, and information provided were absolutely essential to the success of this study. Indeed, many of these people (well over 100 participated in one way or another) had such great experiences and stories that we often ran out of time when meeting with them.

Then there is also the staff at the state libraries in Colorado, Pennsylvania, Florida, and Michigan who helped to organize numerous meetings, interviews, and focus groups. The state librarians in these states (respectively), Nancy Bolt, Gary Wolfe, Barratt Wilkins, and Christie Brandau, provided staff and other assistance during the site visits, as well as in other aspects of the study, making our work much easier. Others at the state libraries such as Keith Lance and Gene Hainer (CO), Barbara Cole and Jim Hollinger (PA), Mark Flynn (FL) and Sheryl Mase (MI) deserve a special note of thanks.

We also want to thank the members of our Advisory Committee for their assistance, suggestions, and time during the study. They include: Beverly Choltco-Devlin, Barbara W. Cole, Mark W. Flynn, Keith Curry Lance, Nancy Laskowski, Anne Silvers Lee, Mary Jo Lynch, Amy Owen, Eileen M. Palmer, Charlie Parker, Pat Wallace, and Rick Weingarten.

We appreciate the interest and involvement of the American Library Association's E-rate Task Force under the leadership of Nancy Bolt. We would also like to thank the American Library Association's Washington Office and its Office of Information Technology and Policy for their valuable assistance in procuring the E-rate data from the Universal Service Administrative Company's (USAC) Schools and Libraries Division (SLD). Their efforts enabled the study team to receive public library E-rate data for additional analysis. We would also like to express our appreciation to both SLD and USAC staff who were willing to assist us understand the E-rate data we received by providing answers to our questions regarding the data, data organization, and data analysis strategies.

The American Library Association's Washington Office was also instrumental in providing financial support to the authors for preliminary research efforts regarding this study. We wish to thank the Washington Office for its support and vision.

There are a number of people at the Information Institute at Florida State University who also assisted on the project. These include Timothy W. Nelson, Arif Dagli, Bruce T. Fraser, and Susan Thomas. Stephen Hodge at the Institute of Public Affairs, Florida State University assisted in the analysis of the data from the School Library Division.

Finally, a word of praise for the external funders, who are the focus of this study and have supported public library Internet development. As shown in this study, this external support from a number of programs funded by the U.S. government, from state government, the Bill and Melinda Gates Foundation, and other sources were essential for public libraries to have made the gains they have in providing Internet services.

- E-rate administrative and programmatic design, regulations, and procedures need to be tailored to fit the needs of individual libraries.

#### **Training**

- The E-rate program needs to be expanded such that it supports training and education in how to use and apply the technologies and related equipment obtained via the program.

#### **Increasing E-rate program flexibility**

- Numerous factors (national, statewide, and local) combine to shape the overall effectiveness of programs such as E-rate; these are poorly considered in the existing E-rate administrative procedures.
- Local governmental regulations, for example, oftentimes preclude administrative procedures that are required as part of the E-rate application and processing requirements.

#### **Statistics and statistical reporting**

- The statistics that are reported to describe the E-rate program can be significantly improved so that the public library community and policy makers can better understand the uses and impacts of the program.
- The databases that are currently in use that collect and report E-rate awards, type of request, etc., need to be redesigned to include FSCS library IDs (as example) to be more useful to the public library community and policy makers.

Additional detail with specific recommendations can be found in the enclosed copies of the final report (study). Please feel free to contact me if you require additional information or wish to discuss these or other recommendations in the attached report (study).

Sincerely,

*Charles R. McClure*

Charles R. McClure,  
Director

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# *Information Use Management and Policy Institute*

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## **PUBLIC LIBRARY INTERNET SERVICES AND THE DIGITAL DIVIDE:**

**The Role and Impacts from Selected External Funding Sources**

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### **Published by the:**

Chief Officers of State Library Agencies

### **Funded by the:**

Institute for Museum and Library Services  
1100 Pennsylvania Avenue, NW  
Washington, DC 20506  
National Leadership Grants Programs, Grant # NR-00009

**January 2002**



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## EXECUTIVE SUMMARY

Over the past five years, many public libraries have come to rely on sometimes small, but critically important, external sources of funding to establish and maintain their technology infrastructure, telecommunications services, and network-based resources and services. These external funding sources may be from the government such as the federal Library Services and Technology Act (LSTA) Grants to State Library Agencies, and the E-rate program, or other federal, state, and local government programs. In addition, non-governmental sources of external funding such as the Bill and Melinda Gates Foundation U.S. Library Program play a key role. External funding is particularly vital to enable public libraries to address the potential for a digital divide in their communities.

Significant during this period was public library use of sources of external funding in combination, rather than in isolation, to leverage outcomes far greater than any single source could achieve. Public libraries engaged in significant experimentation and innovation in information services development. Indeed, public librarians successfully leveraged these external funds to:

- Offer new networked-based programs and services;
- Obtain additional resources and support for their libraries;
- Better integrate themselves into the local community's information infrastructure;
- Encourage economic development; and
- Increase the visibility and credibility of the public library as "the information place" in their community.

Often the external funds used comprised only 1-3% of the library's budget. Yet such funds allowed public libraries to experiment, innovate, and demonstrate how Internet services could be deployed and how such services could be of benefit to all members in the communities that libraries serve.

### Study's Purpose

The present study is the first systematic effort to better understand the role of external funding in the development of public library network resources and services, their identification, and their benefit and impact, particularly as they affect the digital divide. The study investigates:

- What role did key external funding sources, state libraries and public libraries play in the development of public library technology infrastructure, telecommunications services, and network-based resources and services, and address a potential for a digital divide in their communities?
- What common network resources and services did public libraries develop? What were their impact and benefit?
- What next steps do state and public libraries plan that may benefit from external funding?

Study results can assist external funders, state and federal policy makers, the public library community and others interested in the future of public libraries to:

- Identify key policy issues related to the digital divide, particularly Universal Service and equitable access to networked information resources and services in the United States;
- Provide an assessment of the roles public libraries play in the digital divide, and the impact of those roles on the communities the libraries serve;
- Provide a sense of the impacts and benefits communities derive from public library Internet connectivity and services;
- Identify the role of E-rate discounts and other funding sources in library services and technology planning activities;
- Provide a better understanding of how these awards are being used by libraries;
- Provide a better understanding of the E-rate application and disbursement process;
- Assist policy makers to determine how best to refine various Universal Service policy goals through programs such as the E-Rate and LSTA in relation to the digital divide; and
- Assess systematically the relationship between various funding programs and Internet services.

The authors conducted this study between February 2001 and January 2002 employing a range of data collection techniques including site visits, focus groups, surveys analysis of E-rate data sources, local library and state library reports, documents from external funders, and other material.

### **THE CURRENT CONTEXT**

Public libraries reside in an increasingly complex technology environment – one that requires constant innovation in service provision as well as innovation in building and maintaining a technology infrastructure through which to provide network-based services. During the last five years, public libraries have made significant gains in obtaining, deploying, and using a range of Internet and telecommunications hardware, software, and services. These advances, due in part to the leveraging by public libraries of a number of external funding sources, enabled public libraries to build upon their existing infrastructure in ways that would otherwise not have been possible.

The recent digital divide studies conducted by the U.S. Department of Commerce, National Telecommunications and Information Administration (1995, 1998, 1999, 2000, and 2002) identify segments of the U.S. population that are less likely to have access to networked information services and resources in the home. These populations tend to be minority, less educated and lower income. A key question in the digital divide is what community access centers – such as the public library – do to provide those “have-nots” with critical access to technology and technology-based resources.

### **Findings and Key Issues**

The findings from this study support keeping the momentum going on what is a very promising start to the introduction of a new digital age in U.S. public libraries and the communities that they serve. Key findings include:

*LSTA is a model federal program for funding libraries.* Participants indicated that LSTA Grants to State Library Agencies funding, guided by the Institute for Museum and Library Services (IMLS) and managed at the state level by state libraries, works well overall. The principal improvement suggested was to fund adequately what has been by all accounts a very successful and beneficial program. Significant was that study participants suggested only minor changes (such as a possible add of construction/renovation funds if there was an overall, substantial funding increase). There was widespread support among study participants for the American Library Association's (ALA) and Chief Officer's of State Library Administrators' (COSLA) efforts to secure additional funding and their suggested changes.

*E-rate funding is essential to local operations, but needs fine-tuning.* Most library managers agreed that the E-rate initiative was targeted to assist with crucial operating expenses – Internet and telecommunications charges, wiring and basic network equipment. But the program's procedures need attention including:

- Simplify the application process. Most library managers found the process to be a "nightmare," overly "cumbersome," unnecessarily "complicated and unending." They also felt the process failed to recognize the public library's unique mission, distinct from schools, in its community.
- Increase efforts to get clear and accurate information to the library community. Improve involvement of state libraries, consortia, and library systems to achieve this;
- Increase public library participation, in particular, adjust library eligibility requirements to participate in internal wiring and network equipment portions of the program; and
- Find a way to fund support for libraries with neither the staff, time, nor technical expertise to successfully complete the application process.

Participants indicated a need for the E-rate program to allow a different approach, including application process and criteria, for public libraries than for public schools. As public libraries differed in significant ways from public schools in areas such as mission, who they serve, hours or operation, and overall funding-related issues, it is inappropriate to treat them equally in the application, review and award process.

*Leveraging external support to serve those impacted by the digital divide.* It is clear that no single funding source by itself would have successfully introduced a public library Internet service as rapidly and effectively unless that funding source was leveraged with others. Fortunately, with the assistance of state libraries, funds were leveraged to create an information and technology infrastructure capable of delivering a sustained service rather than a piece of equipment to the public. Furthermore, present evidence suggests that no organization, no matter how deep the pockets, can fund by itself the type of effort necessary to make the future incremental improvements in library Internet services. Future funding in this area needs to be flexibly designed to promote leveraging -- the model LSTA's Grants to State Library Agencies. Future external funding programs seeking to have successful state or national reach must actively engage the state libraries as partners to coordinate leveraging and support programmatic goals.

*Equipment was not enough.* Public library managers and funders learned as they implemented Internet services that installing a piece of equipment was not enough. Rather, a

means had to be found to embed an information infrastructure around the new technology to enable a sustained service. It was necessary to leverage different funding sources to rework technology, collections, their organization, types of public service, public training, promotion of these activities, increase staff or change their function, train staff, finance, manage, and evaluate the new service. It was important to coordinate the identification and strategic funding of each information infrastructure element.

*Coordination was necessary and the State Library delivered.* There was a need for some entity to step in and coordinate, influence or nudge funding for public library Internet services in the appropriate direction. Many state libraries took on these roles and did so without much reward – a concern that should be addressed by external funders in the future. Consortia and library systems played significant roles as well, particularly when state libraries with limited resources were overwhelmed. Leveraging of external funds cannot work well without early State library involvement and support for that involvement.

*Someone must have authority and responsibility for seeking external funds.* Clearly, there is untapped support within local communities, governments, and the private sector for public library Internet services. The support may be in cash, but it also may be in a range of creative and/or equitable partnerships. It is imperative for the public library community to identify the next extraordinarily generous Bill and Melinda Gates Foundation, particularly as the computers first received through the generosity of the Foundation are now in need of upgrades.

*Remembering the poorest counties and communities.* In addition to small libraries and urban branches, there is a need to focus attention on the poorest counties and communities in the U.S. It is one thing to design programs that work for most. It is another task to go back and ensure that the intended benefits of a program have reached those who are most in need, often despite programmatic design, regulations, and procedures.

*Maintaining sustainability.* While the Gates Foundation must be applauded for its ambitious, generous and important work in assisting public libraries enter the networked environment and address digital divide issues, who will be the next Gates in 2003 remains unclear. Between 1998-2001 a vast number of public libraries were able to obtain and upgrade information technology and training that would not have otherwise been available to them. In 2003 (or sooner) all that equipment will need to be replaced or upgraded, and ongoing train needs will persist.

*Understanding situational factors.* Numerous factors combine to shape the overall effectiveness of programs such as LSTA, E-rate, and the Gates Fund support. Situational factors occur at a variety of levels that influence funding. They occur at the funding level in how the funds are requested, awarded, and regulated. They occur at the State library level, for example, in terms of personnel, or agency commitment/interest in a particular program. They occur at the local library level in terms of organizational structure, information technology infrastructure, and personnel. Finally, they occur at the community level in terms of local community demographics, form of government, interest in and support for the library, etc. In addition, more research is needed to better understand what combinations of funding programs, State library assistance, local library involvement, and community composition results in the greatest.

External funders must address these and other situational factors. Successful funders – notably the Gates Fund and the LSTA Grants to State Library Agencies – used three strategies. First, successful external funders recognized that many situational factors could only be recognized and addressed during implementation so they built in internal and external evaluation mechanisms. Second, they designed their program with the goal clear but the detail flexible so as to take advantage of what the evaluative process revealed. Third, wherever possible, they listened to and trusted the judgment of their public library partners.

### **Making the Case for Public Libraries**

The findings from the study suggest that there are numerous topics and research questions requiring additional attention. To some degree, the research reported here is a first effort to assess how externally funded programs (LSTA, E-Rate, Gates Fund, and others) have contributed to public libraries' ability to address digital divide issues. This research, however, is but a "snapshot" of benefits and impacts resulting from these external funds during 2000-2001. There is much to learn by conducting such assessments, yet the basic need is to establish a regular *program* of national assessment for such funding initiatives. The Information Institute at the School of Information Studies, Florida State University plans to continue research and data collection efforts and establish a clearinghouse for such information.

The public library community needs to initiate a public discussion and debate about how best to assess the benefits and impacts resulting from external funding programs such as those discussed in this report. This would include agreement on standards and performance indicators for assessing such programs, discussions on how such benefits and impacts contribute to addressing digital divide issues, and determination as to what criteria facilitate the assessment of national policy initiatives and funding programs related to public libraries. Ultimately, there is a need for ongoing evidence and data to assess and refine these programs. The better, more sustained and systematic the assessment, the better the program in terms of its efficiency and ability to achieve its objectives. This, in turn, contributes to sustaining the notion that public libraries are a good place to invest scarce resources in the future.

### **Next Steps**

The authors see this study as a first step on a longer journey to continue efforts to (1) update and improve the information technology infrastructure in public libraries; (2) better coordinate efforts among the federal government, other funders, state libraries and state government, and local libraries and consortia to maximize the impact and benefit from various external funding programs; and (3) improve public library networked and Internet services to better serve those who reside in the digital divide.

Equally important is to marshal resources at the policy level to make certain that those making federal and state policy understand the importance and impact of LSTA, E-rate, and related programs. Findings from the study described here not only document the importance and impact from these programs; they also offer recommendations for how to improve such programs to have even greater impact on public libraries. LSTA and E-rate, especially, need to

be expanded, fine-tuned, and better supported so that public libraries can continue to serve as a key means for mitigating the digital divide.

The findings from this study suggest that the role of public libraries in providing internet access to underserved populations is a complex one. While public libraries are often seen as a key means for mitigating the digital divide, the role of these institutions is often limited by a number of factors, including limited funding, limited staff, and limited space. The study also found that public libraries are often seen as a key means for providing internet access to underserved populations, but the role of these institutions is often limited by a number of factors, including limited funding, limited staff, and limited space.

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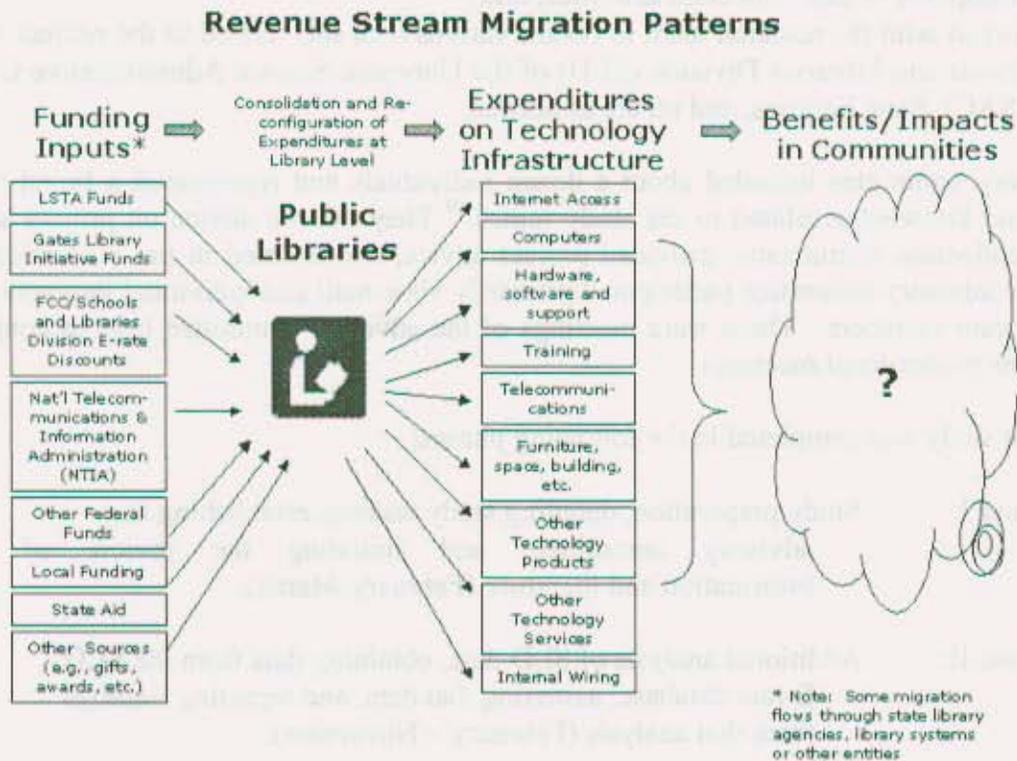
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FIGURE 1.1 Revenue Stream Migration Patterns



Throughout the study, the researchers relied on multiple qualitative and quantitative data collection techniques such as focus groups, interviews, surveys, and case studies. Specific steps in the methodologies and data collection activities were based upon proven research approaches and strategies that ensure valid and reliable data (e.g., Rossi and Freeman, 1993; Krueger and Casey, 2000; Creswell, 1994). More specifically, the study used a multi-method and iterative learning strategy through which the researchers tested and developed tools for the study's data collection activities. Table 1.1 provides a summary of the types of research topics, research questions, and data sources that guided the study in terms of various data collection activities. The range of these research questions was ambitious and not all of the research questions ultimately were addressed (see findings and recommendations in Chapters 2, 3, and 4).

The study profited by the assistance of an advisory committee and from a liaison at the American Library Association's Washington Office, Office of Information Technology and Policy. This person served as a single point of contact for the research team and had the following responsibilities:

- Provided assistance to the research team in identifying key contacts and introducing them to the study team regarding data collection;

- Handled logistics related to meetings between the research team and the advisory committee, and with others as needed;
- Participated in data collection activities; and
- Worked with the research team to obtain various data sets related to the project from the Schools and Libraries Division (SLD) of the Universal Service Administrative Company (USAC), State libraries, and others as needed.

The advisory committee included about a dozen individuals and represented a broad range of interests and knowledge related to the study topics.<sup>10</sup> They offered advice on project activities and data collection instruments, provided project advice, and assisted in the evaluation of the study. The advisory committee participated primarily via e-mail and individual interactions with the study team members. There were meetings of the advisory committee held in conjunction with various professional meetings.

The study was completed in the following phases:

Phase I: Study preparation, detailing study tasking, establishing the advisory committee, and initiating the review of related information and literature (February-March).

Phase II: Additional analysis of SLD data, obtaining data from the SLD E-rate database, assessing that data, and reporting findings from that analysis (February – November).

Phase III: Preparation and actual site visits to four states and follow-up interviews as needed (May-August).

Phase IV: Analysis of site visit data and SLD E-rate database analysis (September-November).

Phase V: Completion of the draft final report and the final report (December – January 2002).

The overview of study phases and activities does not discuss a number of difficulties encountered in obtaining and analyzing data from the E-rate database at the SLD and the logistics related to conducting the site visits in four states.

<sup>10</sup> See Appendix E for a list of Advisory Committee members.

**Table 1.1. Proposed Study Research Areas, Research Questions, and Data.**

Research Area	Research Questions	Type of Data
<p><b>Library Organization and Management</b></p>	<ul style="list-style-type: none"> <li>• What is the effect of Internet connectivity on library staff?</li> <li>• What are the core skills necessary for librarians to work effectively in the networked environment?</li> <li>• How are libraries organizing/reorganizing as a result of the transition to the networked environment?</li> <li>• Does the provision of networked services in libraries require new management and service provision techniques?</li> <li>• What is the impact of the Internet on library strategic and/or other planning activities?</li> <li>• Does the networked environment offer/determine new roles for librarians?</li> <li>• Are new library/community organization partnerships developing as a result of library Internet connectivity?</li> <li>• What are the costs to libraries for providing network-based services?</li> <li>• Does the networked environment enable new library services?</li> <li>• Is there a shift in the <i>location</i> of library services (e.g., in-library v. remote)?</li> <li>• Does provision of network-based services require new library-user policies?</li> </ul>	<ul style="list-style-type: none"> <li>• Staff time, effort, workload changes</li> <li>• Necessary MLS and continuing education training</li> <li>• New organizational structures/models for management</li> <li>• Partnerships, collaborative models</li> <li>• New services/service delivery mechanisms</li> <li>• Planning and role setting</li> <li>• Costs, budgetary issues</li> <li>• Acceptable use policies, minor use, ADA compliance</li> </ul>
<p><b>Social Impacts</b></p>	<ul style="list-style-type: none"> <li>• What are the benefits users and/or particular user segments (e.g., youth, seniors, others) derive through library Internet connectivity and access to network services?</li> <li>• How does the larger library community (e.g., local organizations, and schools) benefit from library Internet connectivity?</li> </ul>	<ul style="list-style-type: none"> <li>• Benefits/impacts of public access Internet services on users</li> <li>• Benefits/impacts of library Internet services/connectivity on the community</li> </ul>
<p><b>National Policy Implications</b></p>	<ul style="list-style-type: none"> <li>• What national policies exist to support library Internet connectivity and network services provision (e.g., LSTA, E-rate)?</li> <li>• To what extent do existing national policies address the <i>actual</i> needs of libraries in the networked environment as identified through data from this study?</li> <li>• To what extent do libraries (as opposed to other types of institutions) benefit from existing national programs to support Internet connectivity (e.g., E-rate)?</li> <li>• Are there other models for developing and/or enhancing library Internet connectivity from which national policy can learn (e.g., Gates, state initiatives)?</li> <li>• Are policy changes necessary to <i>best</i> support library Internet connectivity and network services provision?</li> </ul>	<ul style="list-style-type: none"> <li>• Assessment of key national, state, and other connectivity programs and the benefits/issues of those programs</li> <li>• Assessment of the benefits derived by libraries from the existing national connectivity programs</li> <li>• Determination of the appropriateness of national Internet connectivity programs given the state of library Internet connectivity and network service provision</li> <li>• Identification of recommendations for changes to national policies</li> </ul>
<p><b>Existing Data Analysis</b> (see <a href="http://www.sl.universalservice.org/apply/fcyear2/national.asp">http://www.sl.universalservice.org/apply/fcyear2/national.asp</a> for example analysis)</p>	<ul style="list-style-type: none"> <li>• What states (regions, Congressional districts, cities, etc.) have received what amounts of money?</li> <li>• How much of the disbursements have gone to communities with what poverty levels?</li> <li>• What general types of categories of expenses have been supported by the disbursements?</li> <li>• What types of libraries, size of libraries, library consortia have received disbursements?</li> </ul>	<ul style="list-style-type: none"> <li>• Various cross-tabs that compare amounts of disbursements by community type, by organizational affiliation, etc.</li> <li>• Average disbursement for type of community, size of community, type organizational affiliation, etc.</li> <li>• Disbursements by library type, library size, other key library demographics</li> </ul>

## Issues in Method

There were a number of methodological and other issues associated with the study that are important to note:

- **Co-mingling of resources that support Internet/telecommunications efforts in public libraries.** The degree to which it is possible to attribute *direct* impacts and benefits of Internet services in public libraries to the various sources of funding was and is problematic. Public libraries receive external support for Internet-based and other technology-related services through E-rate, LSTA, Gates Fund, and/or state-based initiatives.
- **Availability of data.** There are several data collection efforts underway and/or data sets that were available for analysis purposes. These data sets (e.g., SLD, Gates, NTIA, etc.) often times were non-comparable and upon examination, were quite difficult to manipulate.
- **Other evaluations.** The Department of Education conducted an evaluation of the E-rate as the discounts relate to schools during this study. Members of the study team provided assistance to this effort regarding data collection for school and public libraries. More recently, the Benton Foundation issued a study *Great Expectations: The E-rate at Five* (2001) which did not address the role of libraries in E-rate. The study team found it was quite difficult to relate the research activities of these (and other) evaluation efforts in determining the broadest impact picture of the E-rate discounts.
- **Evolving policy environment.** The various federal programs have seen a number of developments and changes since passage of the Telecommunications Act of 1996. Additional changes occurred in the procedures for distributing E-rate disbursements, policy related to the E-rate program, or changes made in the organizational structure for the SLD. Similar changes occurred and are likely to occur in the future regarding LSTA and awards from the Gates Foundation.

In short, the findings are based upon a snap shot of the environment related to public library Internet expenditures during the Summer and Fall of 2001. Additional research (see Chapter 5) will be needed to update the snapshot as reported here.

## Benefits and Importance of the Study

The recent digital divide studies conducted by NTIA (U.S. Department of Commerce, National Telecommunications and Information Administration, 1995, 1998, 1999, 2000, 2002) identifies segments of the U.S. population that are less likely to have access to networked information services and resources in the home. These populations tend to be minority, less educated, and lower income. A key question in the digital divide discussion is what community access centers – such as the public library – do to provide those “have nots” with critical access to technology, training in its use, and technology-based services. Moreover, there has not been a systematic study of the *specific* services that public libraries provide in the networked environment and the impacts and benefits of those services on the digital divide.

## *E-rate*

The Telecommunications Act of 1996 (P.L. 104-104) (U.S. Senate, 1996) laid the groundwork for the establishment of the E-rate – a means by which the federal government would provide discounts to reimburse schools and libraries for various types of expenditures related to connecting to and using the Internet – as one means through which to guard against a digital divide fostered by technology “haves” and “have-nots.” As of November 2001, some \$7.65 billion in discounts has been committed to reimburse schools and libraries based on applications filed by these schools and libraries,<sup>5</sup> of which only an estimated 3-4% has gone to libraries.<sup>6</sup> This study focuses on E-rate discounts provided to libraries.<sup>7</sup> Indeed, this report may be the first study to consider E-rate’s role in the provision of public library Internet services on a national level.

## *Bill and Melinda Gates Foundation*

The Bill & Melinda Gates Foundation U.S. Library Program started in 1997 with the goal of expanding public access to computers, the Internet and digital information in State library certified public libraries that serve low-income communities. The Gates Fund has been the principal private funder of public library Internet service development spending \$109,141,929 as of November 2001,<sup>8</sup> with a total investment of \$250 million projected by the end of 2003.<sup>9</sup>

## *Previous Work by the Study Team*

The study reported here builds upon previous research conducted by the authors and funded by the American Library Association, Washington Office (McClure and Bertot, 2000a, 2000b). These previous efforts intended to determine the feasibility of assessing the benefits and impacts from various funding sources on the role that public libraries played in addressing digital divide issues. Based on the research completed through 2000, the following *preliminary* findings resulted from that earlier work:

- 1998-2000 was a unique time period for public library information technology infrastructure development because of the E-rate, LSTA, and the Gates Foundation awards: E-rate promoted infrastructure and telecommunications, LSTA promoted program development, and Gates provided necessary hardware and software. The combined and concurrent significance of these three programs has, as one library director commented, “had an unparalleled impact on improving our library.”

<sup>5</sup> See <<http://www.sl.universalservice.org/apply/fcyear2/national.asp>> for details.

<sup>6</sup> See: Universal Service Administrative Company (USAC). (2000). Funding commitments by rural/urban statistics and entity type. Annual Report. p. 38.

<sup>7</sup> For studies assessing the E-rate on schools see, for example, U.S. Department of Education (2000) and Benton Foundation (2001).

<sup>8</sup> From Gates web page: <http://www.gatesfoundation.org/libraries/grants/default1.htm> Microsoft software contribution is probably not included in this total.

<sup>9</sup> Bill & Melinda Gates Foundation U.S. Library Program. (2001, February 21). Press release. <<http://www.gatesfoundation.org/pressroom/release.asp?PRindex=352>>

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While the authors gratefully acknowledge all the various people and organizations that contributed to the completion of the project, the responsibility for the report belongs to us. Specifically, the research and points of view expressed in this report are those of the authors and do not represent the official position or policies of the sponsoring organizations.

We realize there is still considerable room for debate and discussion of the findings and recommendations offered in this report. Clearly, there is a significant range of Internet and telecommunication impacts and benefits in public libraries. This evolution (or perhaps revolution) of public libraries in terms of their Internet services, and the role of external funding in making this happen, is exciting and significant. We look forward to working with others as public libraries continue to evolve in this networked environment and as external funding programs continue to support this growth and development.

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January 2002