



Contents lists available at ScienceDirect

Library & Information Science Research



Government information policy research: Importance, approaches, and realities

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ARTICLE INFO

Available online xxxxx

ABSTRACT

Information policy research is a critical tool in the arsenal of library and information science researchers. As developments occur in information access, use, technology, and management, information policies require more attention and research. The article describes the nature of government information policy and policy research, characteristics of policy research, and examples of research methods and approaches that can be used. The differences between textbook-based policy research and how policy research might be implemented in action are also discussed, as are the inter-connectedness of information policies and ways to describe impacts of information policies. The article recommends that researchers and professionals give greater education, training, and professional association attention to using policy research on a day-to-day basis.

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1. The nature of government information policy

Policy at any level is the set of government directives intended to shape decisions and actions of individuals, organizations, and government agencies. As such, policy can be established by legislation, executive orders, judicial rulings, guidelines and regulations, rulemaking, agency memos, signing statements, agency circulars, and other types of official statements. Different agencies often create incompatible, redundant, or conflicting information policies. Further, no central body of law or agency coordinates and oversees information policy in the United States. Once implemented, these policies directly affect actions of individuals, organizations, and governments. Issues related to policies tend to be the subject of ongoing debate and long-term discussion (McClure, 1999).

Information and information and communication technologies (ICTs) now are essential to almost every part of modern life—personal interactions, business transactions, and government operations. Information policy can best be understood as the set of specific goals created by governments to shape the creation, access, management, exchange, security, display, collection, and other uses of information. Information policy includes a range of issues, such as those related to privacy; secrecy and security of government records; information access, retrieval, and use; freedom of information legislation and government transparency; intellectual property; e-government; veracity of government information; ICTs; and information management. Information policy therefore affects the everyday use of information in myriad ways, including the amount and types of

government information available for access by individuals, the privacy protections for personal information, government transparency, and the collection of national security information, among innumerable other contexts.

Given the omnipresent nature of information and ICTs in society, local, state, and federal governments and international bodies have developed a wide range of policies related to information. “As printed and electronic information has become the lifeblood of government, commerce, education, and many other daily activities, information policy has come to influence most interactions in society” (Jaeger, 2007, p. 842). Information policies simultaneously shape the deployment of ICTs; create advantages and disadvantages in relation to information; influence other policy systems; govern the operation of institutions; determine the parameters of government information activities; and significantly affect political, societal, and economic choices related to information (McClure, 1999). With policies related to information being created by local governments, state and provincial governments, national governments, and supranational and non-governmental organizations, the information policy environment is more complex and complicated than at any previous point in history. The profusion of policy around the globe has closely paralleled the enormous changes in ICTs over the past fifty years.

New ICTs (e.g., the telegraph, radio, television, railroad, and telephone) have significantly influenced the political processes and government functions (Bimber, 2003). The policy activity related to information, however, is not always meant to promote growth and adoption of new technologies related to information. New ICTs often compel governments to alter policies to fit the new technological environment. Homeland security in the United States has led to significant changes to the information policy environment, as well as

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the creation of new information policies related to information collection, access, and security. Policy changes that affect the societal roles of information have far-reaching consequences. Information policies both address a societal issue regarding information and attempt to balance the interests of different stakeholder groups affected by an issue (Thompson, McClure, & Jaeger, 2003).

Information and ICTs have mushroomed in importance in interpersonal, financial, and governmental transactions and interactions with the rise of the World Wide Web, and many new information policies have emerged. The legal landscape “has become filled with laws and regulations dealing with information and communication” as more than “600 bills dealing with the Internet alone were on the table during the 107th Congress” (Braman, 2004, p. 153). Information issues now consume more time in Congressional hearings than do many other issues (Mueller, Page, & Kuerbis, 2004). Consider the public laws related to information policy in the United States that have arisen in the past decade, including the Telecommunications Act of 1996 (47 U.S.C. § 225), the Digital Millennium Copyright Act (P.L. 105-304), the USA PATRIOT Act of 2001 (P.L. 107-56), the Homeland Security Act of 2002 (P.L. 107-295), the E-Government Act of 2002 (P.L. 107-347), and the Children’s Internet Protection Act (P.L. 106-554). Further, one of the major sources of contention in the past decade between the United States and European Union has been over an information policy issue—the privacy of personal data (Sunosky, 2000).

2. Characteristics of information policy research

2.1. Goals of information policy research

Though policy analyses often focus on processes and legal outcomes, information policies affect all facets of information. Information policy exists within the greater context of the global information society, which is filled with people, organizations, and governments worldwide that constantly engage in a range of information behaviors, such as accessing, exchanging, managing, and using information. Policies that frame information management are vital in shaping society, especially within the context of the Internet, electronic databases, e-government, transnational information flows, and other elements of the networked environment. Research about information policy—which evaluates the effects of such policies on individuals, organizations, and society—also plays a vital role in shaping society.

The general goal of policy research is to understand the effects, impacts, and outcomes of a policy within a greater political and social context (Rossi, Lipsey, & Freeman, 2004). It can determine if, and under what conditions, a policy and its components are effectively meeting programmatic, ethical, societal, economic, and intellectual goals. It also looks at means of improving the policy’s performance and increasing its positive impact on society (Chen, 1990; Henry, 2003; Henry & Mark, 2003; Sanders, 2001). Important outcomes of policy research include providing information about performance, identifying and critiquing underlying goals and assumptions, and offering recommendations (Dunn, 1994). By incorporating diverse user views, policy analysis creates bridges to other types of user-centered evaluation, such as usability testing (Doty, 2001). Policy analysis can also raise public awareness of an issue and encourage public discourse regardless of the results of the evaluation (Henry & Mark, 2003). In the process of policy development, implementation, and review, research can play both a formative role—helping to continually refine and update policies—and a summative role—helping to ascertain whether the policy goals and objectives are being met (Jaeger, Thompson, & McClure, 2004; Thompson et al., 2003). Ultimately, information policy research can offer prescriptions for improving a policy, provide new perspectives on a policy, detail the impacts of a policy, and generate suggestions for policy alternatives.

2.2. Key characteristics of information policy research

Information policy research has a number of key characteristics that are central to analyzing, evaluating, and understanding information policy issues in society. Policy research moves beyond purely technical issues. It explains conflicts between policies and stakeholders, excoriates assumptions and values, offers guidance in articulating conflicting issues, assesses real world impacts of the policy, and provides possible solutions or alternate ways for viewing the situation.

Beyond the fact that the focus of the study is a policy or policies related to information and/or ICTs, information policy research is:

- About real societal and political problems that exist in society. These are not abstract, theoretical, or hypothetical issues, but wide-ranging issues of great individual, societal, and governmental impact. The issues and stakeholders at the center of information policy problems are real, immediate, and directly affected by the policy.
- Oriented toward identifying and solving societal and political problems that arise from the creation, implementation, and enforcement of public policy. It can also serve to evaluate and improve the effectiveness of the policy-making and review process.
- Multi-disciplinary and multi-method. Research methods, approaches, and perspectives in researching policy can be drawn from numerous academic disciplines—primarily those of social science, behavioral science, and law. It can employ literature reviews; scientific, social science, and behavioral research methods; and interpretation and analysis based on the findings of the research. The methods can include quantitative and qualitative approaches. The tools used will depend heavily on the policy at issue, though multi-method approaches are often most appropriate.
- Influenced by many different stakeholders and contextual factors, which are often beyond the control of the researcher. Policy research does not occur in a laboratory; as a result, the researcher cannot change many factors that influence a policy and its implementation. Nevertheless, information policy research must account for the populations, organizations, and government agencies affected by the policy and the significance of the impacts. Research must be designed, conducted, and analyzed with such realities in mind.
- Marked by actionable findings and recommendations. Findings from information policy research can be innovative and creative, but they must also be practicable and practical. Again, this is research about current societal problems.

While there are other ways in which information policy research can be framed, these elements are its core aspects. Implementing policy research in everyday organizational situations can be especially challenging.

2.3. Analyzing information policies

Information policy research can investigate an array of issues related to the roles of a policy in society: other policies, policies’ effects on individuals, organizations, and government agencies. Major kinds of questions that can be investigated include:

- Clarity — Does it have a clear meaning? Can a reasonable person understand the intent? Are the key terms carefully defined? Are there examples or applications in the policy?
- Consistency — Is the policy internally consistent?
- Ambiguity — Can the policy be interpreted in multiple plausible ways? Are there established parameters for the policy? Does the policy cover one topic or multiple topics?
- Contradiction — Does this policy run counter to another policy? Are there inherent contradictions within the policy? Does the policy comply with related judicial holdings? Is it constitutional? Is it ethical?

- Duplication – Does it duplicate another policy?
- Implementation – Are methods, responsibilities, and timelines for implementation defined?
- Enforcement – Are methods, responsibilities, and timelines of enforcement defined?
- Gaps – Does the document include all guidance needed to implement the policy? Is there sufficient detail to implement and enforce the policy?
- Combination – What happens when the policy is viewed in combination with other policies?
- Evaluation – Are there mechanisms for citizen or agency input? Are there modification processes? Are there sunset clauses? Are there timeframes or benchmarks for policy evaluation or reevaluation?
- Impact – What populations, organizations, or government agencies are affected? Are there disproportionate impacts on certain populations? Is the policy biased in favor of or against certain groups? What short-term and long-term societal consequences can be reasonably foreseen from the policy? What is the best-case impact of the policy? What is its worst-case impact?

Though not each of these questions will be relevant to every information policy study, the answers to these kinds of research questions can provide a wealth of valuable information with which the policy can be described, analyzed, and evaluated.

As the primary goal of policy research is to create actionable findings and recommendations of societal value, there are important questions that any information policy research should address:

- Does the policy successfully address the problem it is meant to address?
- Is the problem that is the focus of the policy of societal or political significance? Who is affected by the problem? Is the problem even solvable?
- How does the policy impact the various stakeholder groups, individuals, organizations, and government agencies?
- Does the policy create any other societal or political problems?
- Can actions be taken to improve the implementation, enforcement, impact, or management of the policy?
- Are new means of implementing the policy or alternate policies preferable?
- What are the foreseeable short-term and long-term consequences of the policy for information management, individuals, society, and government?
- How does the policy work within a democratic society? What are the ramifications of the policy for democracy, civic engagement, and governance?

Research that addresses such issues will not only address the policy problem; it will also raise public awareness of an issue and encourage public discourse regardless of the results of the evaluation (Henry & Mark, 2003). To address these questions, information policy research can involve the use of a variety of different methods and approaches individually or in combination.

3. Research methods and materials

Information policy research can involve collecting new data, analyzing existing documents and data, or both, depending on the problem at hand. Unlike many other types of research, information policy research can involve virtually any research method to collect new data. It often employs a combination of methods to address the problem. Depending on the issues being addressed in the particular study, information policy research can include qualitative and quantitative methods that involve analytic, theoretical, historical, ethical, and design and testing approaches. Specific data collection methods that can be a part of an information policy study include surveys; in-person interviews; focus group interviews; evaluation;

application of social theory; application of ethical standards; statistical analysis; usage statistics; verbal protocols; and usability, functionality, and accessibility testing, among many others. Using any method within information policy research requires that the method match accepted academic standards such as validity and reliability. Including information from a survey with a low response rate (e.g., 25%) will not contribute meaningfully to a study.

In information policy research, using a multi-method approach to evaluation often optimizes collecting sufficient data to understand and analyze the problem fully (Jaeger, Thompson et al., 2004; Thompson et al., 2003). In many studies, multi-method approaches have the further benefit of allowing for triangulation of methods and data to ensure that the findings and conclusions are appropriate and accurate. If multiple methods are used in a study, each method of evaluation should play a specific role, complementing one another and increasing the range of insights into the issue. A further advantage of the multi-method study is that the different types of data collected can help to bring more attention to an issue than a single method could alone (Gordon & Heinrich, 2004).

Along with collecting new data, policy research relies heavily on analyzing existing information related to the policy. This existing information includes:

- Source policy documents: The laws, regulations, executive orders, guidelines, and other government documents provide the literal source, definition, scope, goals, guidelines, and requirements of information policy. A policy cannot be researched without a full analysis of its legal and governmental context.
- Government statistical and demographic information: Governments often collect statistical and demographic data without analyzing it in terms of a specific policy. Such resources can be enormously useful for situating a policy issue within the greater societal context.
- Other scholarly research: As with most types of scholarly work, previous studies can often be very helpful in analyzing an information policy. Previous studies show the perspectives of different researchers and academic disciplines. When looking for research studies of relevance to policy research, it is important to remember that many studies related to information examine the impact of policies without tying the data to the policy issues.
- Popular media: The media often provide reports on perceptions or impact of policies. Generally, the most reliable materials come from highly regarded media outlets, such as major newspapers, major news magazines, and prominent news Web sites. Even the most prestigious media outlets will likely have a particular perspective on most policy issues that need to be considered in policy analysis.
- Professional organizations: Perspectives on policy issues are often provided by related professional organizations, though these directly reflect the goals of the organization. Many professional organizations have professional and ethical stances related to information policy issues that are helpful in understanding the perceived societal context and impact of policy. As with media outlets, researchers must consider the organization's particular perspective on a policy.
- Public advocacy groups: Individual groups have a particular point of view or perspective on a range of information policy issues. Although these groups advocate for that perspective, they often commission studies or otherwise investigate information policy issues. The resulting reports can be very useful in policy research.
- Think tanks, foundations, and non-profit organizations: These organizations often conduct or commission original research about problems related to information policy. The methods from these studies must be carefully scrutinized to ensure they meet academic standards, and the organizations' agendas may influence the goals of the studies. However, the data can also be helpful in providing context.

The problem and the nature of a study determine which types of sources may be most helpful. In the use of methodology, information

policy research is uniquely situated to draw from a vast range of approaches, sources, and disciplines. When applied properly, this array of methods can produce important insights into policy and society.

4. Policy research in real time

The above discussion is the prescriptive approach about how best to do policy research and the factors to consider when conducting such research. An interesting aspect of information policy research, however, is how such research takes shape and is implemented in real-time. A number of publications describe how policy research *should* be done (Howlett & Ramesh, 1995; Majchrzak, 1984; Weimer & Vining, 1999). While these sources are useful, they often fail to recognize the researchers' constraints and issues when implementing and conducting such research. In fact, conducting information policy research is frequently "messy" for a number of reasons, as detailed below.

4.1. Role of the client

Often, the impetus for conducting policy research is a government agency or other type of organization that has been involved in the topic or has responsibility for related issues. Because of the nature of information policy work, the client often has a specific perspective on the nature of the policy under investigation. For example, in one instance a federal government agency hired researchers to investigate the degree to which federal records management policies were implemented successfully in the agency. The client for the study was also the funding agency; such a situation is not uncommon in policy research.

This situation causes a number of conflicts and issues for researchers. The degree to which the funding agency wants to know, objectively, the success of records management and then develop interventions may conflict with learning that implementation of records management policies are being done poorly. Thus, there may be various types of repercussions of the study within the agency. Moreover, the researchers may feel constrained in their ability to report findings that they know will not be popular with the client and may limit the likelihood of obtaining additional funding in the future. While proper research techniques and ethics can never be abandoned, the role of client can raise complex issues in policy research.

4.2. Obtaining needed information

Another issue is obtaining a range of information about the policy topic under investigation. In many instances, the information the researchers need may not be publicly available and may be owned or controlled by the organization or government agency being investigated. The agency's response to requests for such information can range from stone-walling to complete cooperation. For example, in one instance where researchers were studying the use of specific information policies related to privacy on an organization's Web site via logfile analysis, the organization refused to make these logfiles available.

There are a number of reasons why the information records needed for a policy study cannot be obtained, but the end result is that the researchers are at a decided disadvantage when organizational information—be it logfiles, internal documents, or information covered by national security considerations—is not available for analysis. Given the societal and political context associated with many information policy studies and the current homeland security environment, owners of important information may see the information as "sensitive." The owners may not release the information, or they may not admit that such information even exists at all.

4.3. Changed political environments

The political context in which an information policy study is conducted is typically dynamic and changing. As the political context

changes over time, so too can the issues and players. In one instance, the researchers investigated information policy covering access to and management of electronic information in the federal government. With a number of months remaining in the study, a new President took office. The interests and issues of the new administration were quite different than those of the administration that had hired the researchers. Thus, the nature, method, key issues, and methods of analysis of the policy study changed dramatically in the middle of the study.

4.4. Changed policies

Various information policies and regulations can be changed or modified while the study is in progress. In a study of how policies and regulations related to the public libraries' E-rate awards were implemented, a number of the policies and specific forms and regulations changed during the study. This unanticipated event resulted in significant confusion among study participants and required the study method to be completely revised and re-implemented. The confusion over which policies and regulations were being studied continued to confuse participants and likely had a negative effect on the reliability and validity of the data. Ultimately, the researchers decided not to complete the study; they decided to approach it differently at a later time.

4.5. Recommendations and interventions

An important product of information policy studies is a set of recommendations or interventions by which the policies might be improved through revising the policy instruments, clarifying regulations to implement the policy, developing specific interventions in the management and/or oversight of the policy, and so on. Unlike some other forms of action research, the policy researchers are not able to implement the recommendations directly and are dependent on others to (1) implement the policy changes and (2) implement those changes correctly. Indeed, the researchers have had experiences when the recommendations that resulted from a policy study were "clarified" such that when implemented, they made the policy situation more convoluted than it was prior to the study.

To further complicate this topic, policy research rarely includes an implementation phase to compare and assess the various policy recommendations and interventions. Thus, the recommendations may require actions from the funding agency or, more likely, a host of additional agencies. The more agencies that are involved in the implementation, the more complicated that implementation is and the more likely that various political agendas will have conflicts. In short, designing successful strategies to implement policy recommendations can be challenging.

5. An example of conducting policy research in real time: E-government and public libraries

The purpose of this section is to provide a brief example of how a policy study of public libraries and e-government evolved over time and how a range of events and circumstances affected the study and its development. A number of these events and circumstances could not have been anticipated when the researchers planned the study. Thus, to some degree this example describes policy research that evolved in a dynamic set of circumstances over time. The experience of the researchers is that such studies with evolving methodologies are more likely than those typically described in policy research textbooks.

This policy study began in the summer 2006 by identifying a range of policy issues affecting the success of public libraries in delivering E-Government—including online government information, forms, and services—as a basis for submitting a proposal for external funding.

With some financial support from the American Library Association, the researchers initiated the study by organizing an invitation-only meeting of key individuals knowledgeable about federal e-government, e-government information policy, and the role of public libraries in e-government. The goals for the December 2006 meeting were to:

- Increase government officials', the public's, and public librarians' awareness of the importance of public libraries in providing access to and dissemination of e-government services and resources
- Identify and discuss a number of key policy issues related to the role of public libraries e-government
- Identify research topics that required additional investigation
- Offer recommendations for improving the effectiveness by which public libraries can participate in the provision of e-government services.

Ultimately, the researchers hoped that the meeting would be a springboard from which additional initiatives and strategies could be developed to (1) better understand the federal information policy system related to e-government and (2) improve the delivery of E-Government services to all individuals in the United States.

Researchers considered the meeting a success. It resulted in a final report that documented meeting activities and made a number of recommendations, including a proposed federal legislative initiative to amend the E-Government Act of 2002 and include public libraries as key participants in the e-government process (McClure, McGilvray, Barton, & Bertot, 2007). The meeting and the report garnered some attention in various library and information science (LIS) publications. They helped government officials and the public library community to reconsider information policy related to e-government and public libraries (Oder, 2007).

Since 1994, the researchers have also conducted annual ongoing national surveys of public libraries and the Internet funded by the Bill and Melinda Gates Foundation, the American Library Association, and others.¹ In the 2006 survey, the researchers inserted an open-ended question asking respondents to identify the most important impact on their communities resulting from the availability of public access workstations. Based on results from this question and other data from the survey, the researchers learned that in the 2006 hurricane season public libraries provided a range of e-government services with virtually no information policy infrastructure in place at either the local or state level. This finding re-enforced conclusions from the earlier policy meeting described above.

As a result of the data from the policy meeting and the survey data, the researchers produced a number of papers describing the role of public libraries in e-government (Bertot, Jaeger, Langa, & McClure, 2006a, 2006b; Jaeger, Langa, McClure, & Bertot, 2006). These research efforts generated a range of findings related to federal, state, and local information policies that affect public libraries and e-government. However, the researchers did not anticipate the high level of responses on the open-ended question on the national survey would generate related to e-government, nor the wealth of information that resulted from the question. Indeed, the primary survey objectives did not address e-government or e-government information policy.

The next step in the study was to submit a proposal to a federal funding agency in 2007 to investigate a range of research questions related to e-government and public libraries:

- What types of e-government and emergency services and resources do individuals typically seek through public libraries?
- What services and resources do public libraries typically provide, and how do they present these services and resources to the community they serve?

- What are the costs (e.g., resources and training) to public libraries that function as the intermediation organization between individuals and government?
- What types of benefits and what value accrue from public libraries' involvement as the access and dissemination point for e-government and emergency services?
- What models of public library e-government dissemination are most effective given the nature of the local community and local government?
- How can public libraries better coordinate e-government and emergency services with federal, state, and local governments?

Findings from addressing these research questions would have informed recommendations for developing a comprehensive federal information policy related to the deployment of e-government services through public libraries. The federal agency declined to fund the proposal, so the researchers explored other avenues for continuing the research effort.

Because for a number of years the federal government had limited interest in e-government information policy research, the researchers determined that they would refine the scope of the investigation by concentrating on e-government and public library information policy at the state and local levels. For example, in Florida, the approach currently being taken is multi-method:

- Conducting a policy analysis of Florida laws and regulations related to e-government and their possible relationship to public libraries
- Comparing Florida e-government information policy to two or three exemplar states in providing e-government (West, 2007)
- Administering a statewide survey and daily log of a sample of public libraries regarding their e-government activities and services
- Working directly with a Florida county library system as a case study in how e-government services and policies can be developed and implemented. This portion of the study is funded in part by a Library Services and Technology Act (LSTA) award from the Florida State Library.

Preliminary findings from these efforts were presented in a paper at the Florida Library Annual Conference in April 2008 (Gibson, Bertot, & McClure, 2008). Additional analysis of existing data has also generated other papers (Bertot, Jaeger, & McClure, 2008).

As of spring of 2008, the above-mentioned studies are underway. Their findings will be presented in the fall of 2008 to a meeting of state and local government officials and the public library community. The findings will serve as recommendations for detailing and improving the Florida e-government information policy system to help public libraries provide e-government services more successfully. Based on the findings and the result of the meeting, a comprehensive legislative policy initiative related to e-government information policy will be presented to the Florida government for action in the 2009 legislative session.

The example described briefly merely hints at the breadth of the various initiatives that have occurred in this area of policy research since the fall of 2006. It suggests that for real-time information policy research to be successful, it must:

- Take advantage of conditions or circumstances that arise during the policy study itself
- Allow methodologies and data collection approaches to evolve in light of dynamic policy environmental changes
- Find sponsors and potential funding agencies throughout the length of the study to build collaborative support for the effort
- Identify key participants who are willing to be involved in the study and shoulder some of the study costs
- Recognize that policy studies are likely to include a range of other social science research methodologies that support policy research
- Allow longer periods of time than anticipated to complete the study

¹ For more information, see <http://www.iif.su.edu/plinternet.cfm>

- Be flexible in changing the scope, method, and specific objectives of the study.

In many cases, the development, administration, and completion of a particular policy study is as much policy science as it is policy action research; it is intended to provide actionable outcomes that can help address issues identified in the policy environment. Further, policy research that enfolds both of these approaches seems to be done more frequently than purely abstract, “scientific” policy approaches that are described too cleanly in policy research and social science textbooks.

6. The inter-connectedness of information policies

The policy study described above specifically targeted information policy related to e-government and public libraries. As the study progressed, however, a number of additional areas of information policy had to be incorporated into the study because they also affected e-government issues. In most information policy research, the effort to control the scope of the study is a major concern as numerous information policy topics and issues are often related and connected to the policy area under investigation. This section offers a brief discussion of some of the information policy areas that became intertwined with the research related to e-government and public libraries.

6.1. National security

The degree to which public libraries can successfully deliver a range of government information has been drastically affected by the terrorist attacks of September 11, 2001. Since the attacks, federal, state, and local government information has been much more carefully scrutinized to ensure that national security information is not released to the public. The implications of tighter controls over access to public information include government information that has been removed from government Web sites, restrictions on the release and availability of “sensitive” government information, and increased difficulty for public libraries to identify and access certain types of government information requested by patrons.

Numerous information policy areas, many of which are outlined in the USA PATRIOT Act, have a direct impact on public library's provision of e-government services and resources (Jaeger & Burnett, 2005; Jaeger, McClure, Bertot, & Snead, 2004). For example, libraries may restrict access to the records they keep and to whom they provide services for fear that federal agents will demand access to user logs and other personal information regarding the use of e-government services from their particular library. Federal agents may wiretap selected telecommunications going into or out of the library to obtain information on suspected terrorists. If a librarian discloses that the federal government has issued a National Security Letter requesting access to library files, that librarian may face legal consequences. These and other information policy issues have a significant impact on the degree to which public librarians may wish to engage in E-Government services.

6.2. Telecommunications

The success with which public libraries can participate in E-Government is related to the quality and sufficiency of the bandwidth available in the library (Bertot & McClure, 2007). During the period in which the study has been conducted, there have been significant disputes as to the U.S. broadband policy environment and the degree to which federal telecommunications and broadband policy does (National Telecommunications and Information Administration, 2008) or does not (Center for Creative Voices in Media, 2007) promote increased access to broadband with higher quality and reduced cost.

Preliminary findings from the e-government study suggest that public libraries with reduced broadband access also have limitations on the range of e-government services and resources that they can provide to the public. This is especially true in the provision of large data sources, such as those available from the National Aeronautic and Space Administration (NASA)² and a number of other government agencies. Thus, there are a number of broadband information policy issues related to access, quality, cost, and availability (rural vs. urban areas) that affect the success with which public libraries can engage in e-government services.

6.3. E-rate and universal service

Information policy issues lie within related policy issues that oftentimes confound policy studies. Within the broad topic of telecommunications policy is another information policy issue—E-rate and universal service—that affects public library's provision of e-government. The Telecommunications Act of 1996 establishes a Universal Service Fund administered by the Universal Service Administrative Company to oversee the Schools and Libraries Program.³ As part of this program, public libraries can apply for E-rate support to obtain discounts for selected telecommunications, Internet access, and internal connectivity. The procedures for requesting these discounts have been criticized for a range of reasons (Jaeger, Bertot, McClure, & Rodriguez, 2007; Jaeger, McClure, & Bertot, 2005). However, the success with which a public library can work through these procedures has a direct bearing on the quality of the library's information infrastructure and degree to which that infrastructure can support provision of e-government services.

6.4. Privacy

Understanding information policy related to privacy is critical for the success of e-government services by public libraries. For example, patrons come to Florida public libraries to complete forms and obtain assistance from a number of programs administered by the Department of Children and Families (DCF). Selected public libraries partner with DCF to assist in these e-government programs. While helping patrons complete these forms, librarians may come to know a range of the patron's personal information. How can librarians shield themselves from this information? To what degree (if any) do librarians infringe on federal, state, or local privacy policies by assisting patrons in this manner?

6.5. Public access

The *United States Code* outlines a range of laws related to public access to government information and the role of the depository library program in providing such access. Because many of the sections of the code have not been updated for the electronic, networked environment and e-government services, existing policies administered by the Government Printing Office (GPO) may complicate public library's providing e-government resources and services. There are provisions of the E-Government Act of 2002—especially Chapter 36, “Management and Promotion of Electronic Government Services”—that appear to bypass a range of information policies and regulations regarding public access that traditionally have been under the jurisdiction of the GPO. How these ambiguities and possible contradictions are interpreted affect the success with which public libraries can provide e-government services.

² <http://www.nasa.gov/>.

³ <http://www.usac.org/about/universal-service/>.

Stakeholders	Short-term (1-2 years)		Long-term (3 yrs +)	
	Intended impact	Unintended impact	Intended impact	Unintended impact
Group 1				
Group 2				
Group 3				
Group 4				
...and so forth				

Fig. 1. Describing impact from policy research.

6.6. Overview

Information policies can be interconnected, and the investigation of one area often leads an investigator into policy research in related areas. The examples offered above illustrate only some of the areas that the e-government policy research also considered. Additional areas such as the politicization of scientific and technical government information by the Bush administration, copyright and fair use, the effects of the Children's Internet Protection Act (CIPA) on provision of government information, and electronic retention and records management are examples of additional policy areas that also affect public library provision of e-government services and resources.

7. Impact of policy research

Those who undertake policy research recognize that its unique aspects often result in a number of intended and unintended consequences, which can be quite difficult to identify. Researchers usually analyze consequences in terms of stakeholder groups, time, and the consequences that occurred. Fig. 1 provides one approach to consider impact from policy research.

As suggested in the figure, there are four possible types of impact for each stakeholder group:

- Short-term intended impact
- Short-term unintended impact
- Long-term intended impact
- Long-term unintended impact

This model identifies reasons for the difficulty in identifying impacts. First, the researchers need to be able to clarify the key stakeholder groups that will be affected by the policy recommendations. It is difficult to know in advance if the intended stakeholders will be affected and/or if other stakeholder groups should also be considered. Researchers need to identify the intended short-term and long-term impact before the implementation of the recommendations. This allows them to determine later if the intended consequences did occur. Further, developing methodologies to identify unintended short-term or long-term impact of the policy research can be quite difficult and time consuming.

There is rarely a formal, structured approach to assess consequences from research that resulted in policy changes. Typically, such consequences may be assessed only if the initial policy area is revisited by policymakers or researchers. The Congressional Research Service (CRS) is a good example of a government agency that considers impact from previous policy research. In fact, determining impact along the various cells outlined in Fig. 1 takes time and resources. If done well, the process should be extended over a relatively long time period. Impact assessment can also be clouded by the politics of who does the assessment, as well as a range of other personal and organizational factors.

No formal effort has been made to determine the impact of policy research related to e-government. Given that the research began in the summer 2006, one could argue that it is too soon to determine if short-term impacts have occurred and which stakeholder groups were affected. However, from a more informal basis, a number of the intended impacts that the researchers expected to occur have not. A

number of unintended impacts have redirected the research effort in areas quite different than anticipated, and the stakeholder groups originally targeted (federal policymakers) have been replaced by state and local policymakers.

The key stakeholder groups in the e-government research described above included professional library/information science organizations; federal, state, and local policymakers; state library agencies; public librarians; trustees; and U.S. residents with the capacity to use e-government services/resources from public libraries. Each of these stakeholder groups could, in turn, be subdivided. The expanse of key stakeholder groups and the range of possible impacts of interest to e-government policy research suggest the limited capacity of most policy researchers to conduct meaningful impact assessments of policy research.

8. Conclusion: The importance of policy research

Information policy research provides an important, unique approach to examining and analyzing the impact of policy issues, as well as augmenting and expanding the usefulness and findings of other types of research. Policy research provides investigators with a means to better understand the political context in which programs and services operate. It assesses the degree to which laws, regulations, and policies accomplish the societal goals for which they were intended; it helps identify the various stakeholders in a particular policy area and their interests in that area; and it provides a powerful tool for developing recommendations and interventions that may improve those programs and services. Policy research provides tools and perspectives not easily obtained from other social science research methods.

Policy research can also have important, direct impact on LIS education. The findings related to e-government and public libraries, for example, provided the impetus for establishing the e-government Master's Concentration at the College of Information Studies at the University of Maryland.⁴ This program is designed to prepare future librarians and archivists to meet the e-government service expectations of individuals, communities, and governments (Jaeger & Fleischmann, 2007).

The practice of engaging in policy research and the manner in which policy research evolves in practical experience raises a number of issues that can make policy research challenging to implement successfully. The reality is that policy research is a dynamic, evolving, and complex process that must be flexible and easily adaptable to changes in the political environment. This aspect of policy research also contributes to its importance, impact, and ability to effect change. Ultimately, policy research is intended to inform policymakers and stakeholders and enhance the public good.

A seemingly straightforward topic such as public libraries and the provision of e-government services is, in fact, laden with a host of information policy issues. Increasingly, the success with which public libraries operate in their communities is significantly affected by federal, state, and local information policies. The expanse of government information policy, however, is large and growing given the

⁴ <http://www.cipeg.umd.edu/egovcon.html>.

rapid deployment of new ICTs that are incorporated into everyday life and everyday library services. Practical knowledge of these policies and their impact on library services is critical, and ongoing policy research to inform these practical applications in a library setting is also critical. Librarians ignore government information policies and policy research related to these areas at their own risk.

There are a number of strategies that can improve the degree to which information policy research is incorporated into LIS research. First, LIS programs need to provide students with better instruction in federal, state, and local information policy topics, as well as a greater understanding of the nature and roles of government information. In addition, these schools can provide increased attention to policy research as a methodology for students to learn and apply in real world settings. Professional associations and others can offer more training and workshops to practitioners; a number of state library associations have excellent legislative committees who also work in this area. Perhaps most importantly, the library community needs to become more informed and knowledgeable about the range of information policy issues that affect everyday work. Ultimately, to understand the full importance of policy research, both practitioners and students need a better grasp of the entire research process and how policy research is a key element of LIS research. Armed with this knowledge, they can better conduct policy research and effect change in the federal, state, and local policy environments.

Acknowledgments

The authors acknowledge the work of a number of staff at the Information Use Management Policy Institute, College of Information, Florida State University, in the e-government research project and Jordan Andrade, John Brobst, Tommy Snead, and John Carlo Bertot. They also recognize the American Library Association, the State Library of Florida, and the Florida State University Research Foundation for their support of that project.

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