E-Government and Public Affairs Education

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Technological transformations shape much of what we do in contemporary governance. They affect the amounts and types of information available to citizens and decision makers, the speed and volume of communications, the ways we make and implement laws, and the manner in which we deliver public services. The same technological innovations that have hastened the development of global markets in the private sector have had major consequences for the delivery of public services. Just as e-commerce has transformed relationships among producers, retailers, and consumers, so also has e-government opened possibilities for dramatic changes in governance relationships. Those changes, in turn, have substantial implications for public affairs education. It is these implications that I want to address.

Drawing on a limited range of sources on the development of e-government, I want to explore three questions:

1. Where does e-government fit in the curriculum of graduate programs in public policy and administration?
2. Might we expect the answer to this question to vary depending on the institutional home and type of public affairs degree?
3. Should we expect programs to offer a required course on e-government or should we aim to integrate material on e-government throughout the curriculum?

In the American context, this is a familiar problem in some ways because it has been discussed frequently in relation to other topics. These questions require discussion whenever we grapple with the issue of how to insure that students have the knowledge, values, and skills that are critical to successful public service careers.

We can discuss these questions in the context of international variations in governance, public affairs education, and e-government development.

Abstract: This article examines three fundamental questions with respect to the place of e-government in graduate education for careers in public service. First, where does e-government fit in the curriculum of graduate programs in public policy and administration? Second, might we expect the answer to this question to vary depending on the institutional home and type of public affairs degree? Third, should we expect programs to offer a required course on e-government or should we aim to integrate material on e-government throughout the curriculum? These questions are approached through standards developed for public affairs education in the United States, but they are examined in the context of international variations in governance, technology, and education.

The article first traces the development of e-government across the globe, summarizing important issues and considerations that governments must answer as they pursue e-government initiatives. It then reviews standards that have been developed for public affairs education in the United States and turns to the question of how to incorporate e-government in the curriculum.

E-government involves much more than technological and information management questions. Thus, it has implications for the entire public affairs curriculum. It is unlikely that a single course can successfully cover the technical, managerial, and policy dimensions of e-government. For most programs, it will be more productive to explore e-government across a range of courses in the existing curriculum. The approach that is taken is likely to be affected by institutional setting, resources, and faculty competencies. It is also likely to be shaped by the broader social, economic, and political environments in which programs operate. Although the stage of e-government development in the country is likely to make a difference, although we can also hope that our training will also shape e-government's development.
information and services to their citizens. For purposes of that report, e-government was defined as “utilizing the internet and the world-wide-web for delivering government information and services to citizens” (Ronaghan, 2001, p. 1).

The report discusses five stages of e-government. Those are emerging, enhanced, interactive, transactional, and seamless (Ronaghan, 2001, p. 2).

- Emerging — an official government presence online
- Enhanced — government sites increase and information is more dynamic
- Interactive — users can download forms, e-mail officials, and interact through the web
- Transactional — users can pay for services and other transactions on-line
- Seamless — full integration of e-services across boundaries

Each stage represents more developed and sophisticated e-government presence. The study indicates considerable variation in the extent to which countries have developed a web presence. Most governments (88.9 percent) have a web presence. Of those, a majority is at the emerging or enhanced stages. Only 9 percent of UN member states have reached the transactional stage. Of the 169 UN member states with a web presence, eighty-four, less than half of the total member states, have a national government website. Only 36 have single-entry portals, and only 17 have on-line transaction capacity (Ronaghan, 2001: 1-2).

The report goes on to discuss a variety of important issues and strategic considerations for governments to address as they develop e-government applications. It asks how e-government will affect the performance of public organizations, what structural effects it will have on public organization, the skills public employees will need to maximize their performance in an information age, the leadership skills of the new information age, and
whether e-government will affect the autonomy of public servants and lead to a rethinking of conventional administrative practices. It points out the necessity of balancing the needs of citizens with those of government staffers and administrators (Ronaghan, 2001, p. 48).

The report also identifies barriers to e-government in the form of institutional/operational features, managerial characteristics, and policy/planning capabilities (Ronaghan, 2001, p. 49). A series of administrative issues accompany these barriers: insufficient coordination, a failure to develop project management teams for e-government, a digital divide within public administration, weak political leadership, insufficient data on cost effectiveness, and a digital divide in society (Ronaghan, 2001, p. 50-53).

In a report on web portals of American state governments, Gant, Gant, and Johnson (2002) assess the degree of development of e-government in the American states. They define web portals as an integrated entry to a state government web site that provides users with a single point of contact for online service delivery in the state (Gant, Gant, Johnson, 2002, p. 6) They examine the functionality of the web portals of the fifty states in terms of the following:

- openness, or the extent to which a state’s web site provides comprehensive information and services,
- customization, or the degree to which users can uniquely tailor their views of portal content,
- usability, or how accessible the content is for a range of users, and
- transparency, or the ease with which users can determine the legitimacy of the content (Gant, Gant, Johnson, 2002, p. 6).

They find significant variation in the level of development of state web portals and report that the top state portals offer access to services, contact information for agencies, and usability for most constituents of the state. They suggest that progressive states organize web services around activities or events, rather than around agencies. While we might expect that the states with the most well-developed web portals would be those that are wealthy, urban, and highly developed, it turns out that some of the leading states are not. Among the top five states, California, North Carolina, and Pennsylvania might fit that description, South Dakota and Maine do not.

For present purposes, the most interesting aspects of their report deal with their major recommendations for enhancing state web portals. They urge states to do five things (Gant, Gant, Johnson, 2002, p. 7):

- emphasize customer service,
- organize services by events rather than departments,
- allow for customization,
- recognize the diversity of portal audiences, and
- include features that enhance legitimacy of the portal.

Gant, Gant, and Johnson find that the American states are doing better on some dimensions of functionality than others. For example, only seven states allow citizens to customize their view of the site; only two score high on this dimension. They judge four states to be inadequate in terms of openness and 22 to be low. Four states score high on openness. They find thirty states to have medium usability; six are rated high. Finally, they judge most states (33) to have inadequate transparency.

There are, of course, a wide variety of services that could potentially be made available to citizens through state web portals. Gant, Gant, and Johnson (2002, p. 21) say that leading state portals offer such services as car registration; tax filing, form, and instruction download; professional licensing; access to state regulations and pending legislation; recreational licensing (e.g., fishing, hunting); and access to a wide variety of agencies. The possibilities would seem to be endless. Web sites can make available a wide variety of information, including studies and reports, census data, and data for use with geographic information systems. Educational services can be offered over the web. American states have, for example, created virtual universities. A state...
of the Kentucky Virtual University (KYVU), which offers courses from universities, colleges, and technical schools throughout the state, finds that it is making higher education available to citizens who would not otherwise be able to take advantage of it (Kentucky Long-Term Policy Research Center, 2002). Residents of rural areas, where higher education is less accessible, are disproportionate users of KYVU. Although rural residents make up 51 percent of Kentucky’s population, they make up 77 percent of the students of the Kentucky Virtual University.

**NASPAA Standards**

NASPAA Standards for Professional Masters Degree Programs in Public Affairs, Policy, and Administration contain a set of expectations for curricular components. These include a set of common curriculum components that all programs are expected to offer and a set of additional curriculum components for work beyond the minimum core. The latter can include coursework for areas of specialization. The requirements for common curriculum components are as follows (NASPAA, assessed May 29, 2002):

1. **Common Curriculum Components**
   - The common curriculum components shall enhance the student’s values, knowledge, and skills to act ethically and effectively:
   - Human resources
   - Budgeting and financial processes
   - Information, including computer literacy and applications

2. **In the Application of Quantitative and Qualitative Techniques of Analysis, the components of which include:**
   - Policy and program formulation, implementation and evaluation
   - Decision-making and problem-solving

With an Understanding of the Public Policy and Organizational Environment, the components of which include:

- Political and legal institutions and processes
- Economic and social institutions and processes
- Organization and management concepts and behavior

These area requirements do not prescribe specific courses. Neither do they imply that equal time should be spent on each area or that courses must all be offered by the public affairs, public policy or public administration programs. Nor should they be interpreted in a manner that might impede the development of special strengths in each program.

The standards leave open diverse possibilities for the coverage of curriculum components. They prescribe neither specific courses nor specific content. Nor do they mandate a fixed amount of time on any part of the common curriculum components. American public affairs programs, reflecting their diverse origins, institutional settings, organizational locations, missions and faculty competencies, have developed curricula reflecting considerable variation in attention to elements of the common curriculum components. Some give more attention to management, while some give more attention to policy, and yet others emphasize analytical skills.

**Incorporating E-government in the Curriculum**

Most American programs have struggled with the question of what to cover with respect to the management of information and how to deliver that component of the curriculum. Many programs have interpreted this to mean training students to be knowledgeable users of computers for data analysis and report preparation. Others have given some attention to subjects like data base management. Still others have attempted to provide broader coverage of the management and use of information in organizations. E-government broadens the knowledge and skill base with respect to computerization and information that demands coverage, but
like other components of information and computerization, it raises much more than technological and information management questions, as is illustrated in a recent article by Kim and Layne (2001).

In their article, “Making the Connection: E-government and Public Administration Education,” Kim and Layne (2001) provide an overview of the effect of e-government on citizen transactions with government, discuss issues that it raises, and assess its potential to transform how public administration is taught. They note that e-government alters citizen expectations about services. This leads to changes in external and internal government processes and shifts the focus from the agency to the service. It contributes to enhanced demands for efficiency, effectiveness, and accountability, while opening possibilities for greater citizen access to government. They suggest that it makes demands on government functions across the spectrum and leads to a need for new perceptions of leadership. One of the points they make is critical for thinking about how to prepare future managers for their careers. They say it will transform the way government conducts business

In turn, this transformation will create a second transformation: the perception of information technology by government managers and executives. In the past, information technology was perceived as a function to be performed by a director of an information services department in a manner similar to financial and human services issues. In that model, the information services office was simply a staff function separate from executive and line functions. This perception must change with e-government (Kim and Layne, 2001, p. 232).

This leads Kim and Layne to three primary suggestions. Governments need (1) new styles of leadership, (2) ways to rethink how services are provided and (3) the capacity to deal with organizational culture to facilitate changes needed for e-government. They suggest giving chief information officers more authority in the operations of organizations, presumably as a way of integrating services and maximizing information technology’s impact on the organization and its services.

They also offer specific suggestions for the incorporation of e-government in the public affairs curriculum. They note, first, that earlier studies had examined the place of information technology in the graduate public affairs curriculum. Kiel (1986), in a study of 184 programs offered by member institutions of NASPAA, reported that respondents did not think they needed to change their core curricula to add a course on information technology.

Instead, they favored integrating information technology in existing courses. A report from the NASPAA Ad Hoc Committee on Computers in Public Management Education suggested that programs should require “three levels of computer literacy: (1) the ability to use the technology in their own work, (2) the ability to use the technology of the organizations they manage, and (3) the ability to develop policy for the effective use and control of the technology for strategic as well as for operational advantages (Kraemer, et al., 1986, p. 595).” The Ad Hoc Committee suggested that information management be integrated into other courses in the MPA curriculum, as well as being taught in a separate, required computer applications for public managers course for MPA students. Only students concentrating in information management would be expected to take courses dedicated to information management. A similar structure might work for e-government applications.

Kim and Layne suggested one set of topics in e-government for coverage in public administration education. As can be seen in Table 1, they envision a range of topics to be covered in different components of the curriculum. The point of their analysis is that e-government is not simply a technical matter; indeed, as widely recognized, it is a central component of governance in today’s environment. Thus, it connects to a whole range of management functions, including general management, human resources, finance and budget, and information. More critically, it opens a variety of opportunities to deliver services to the public, make information available to the public, and create
enhanced two-way communication between citizens and public officials.

For our purposes, the studies of e-government development internationally and in the American states serve to illustrate the wide range of potential applications of electronic government. By demonstrating current applications, they suggest the diverse agencies, programs, and activities that are likely to be encompassed in e-government. There is hardly an area of government activity for which e-government is not relevant. Nor can we imagine public management positions that will not involve some engagement with e-government. The pace with which applications will develop will vary from government to government. The extent of use will vary across functions and activities. In the long run, however, much of public management will be significantly engaged in e-government. The NASPAA Ad Hoc Committee on Computers in Public Management suggested in 1986 that each of the common core of public affairs graduate programs had a connection to computer applications and information management. We can go further now to suggest that e-government also cuts across the breadth of the curriculum.

Kim and Layne captured only part of the fit between e-government and the public affairs curriculum. If we return to the NASPAA curriculum matrix, we can illustrate how e-government cuts across all components of the curriculum.

Common Curriculum Components: The common curriculum components shall enhance the student's values, knowledge, and skills to act ethically and effectively:

Clearly, e-government draws on and reflects a range of values, skills, and knowledge. Important values include those of public service, efficiency, effectiveness, transparency, privacy, democratization, equity, diversity, accountability and responsiveness. Students should be introduced to the applicability of these values to the development and management of e-government. In a similar vein, students will need knowledge about the range of potential applications of e-government, the organizational and management issues that arise in developing and implementing those applications, and the governance implications of e-government. They will need both technical and non-technical skills to fulfill their responsibilities.

In the Management of Public Service Organizations, the components of which include:

- Human resources
- Budgeting and financial processes
- Information, including computer literacy and applications

While it is easy to think of e-government as a largely technical question of hardware and software design, and, consequently, largely a matter of systems design,
it poses a variety of management challenges in the area of human resources, budget and finance, and information. Whether in recruitment and retention of staff, making budget and financial data available to the public, or the effective management of public programs, e-government is likely to be increasingly important. E-government will change resource mixes; at the same time, it makes demands on managers and policy makers while offering solutions to problems. Students should be able to address the e-government opportunities and challenges in this arena intelligently.

In the Application of Quantitative and Qualitative Techniques of Analysis, the components of which include:

- Policy and program formulation, implementation and evaluation
- Decision-making and problem-solving

Electronic information resources play an increasingly important role in policy analysis and evaluation. They will also be used to engage the public more extensively in policy-making, provide information resources to inform public debate, and search for innovative and creative solutions to problems. One potentially important application, of course, is in the conduct of elections. While we are not yet ready to move to online voting in public elections, the first experiment with this approach to public engagement took place in the American presidential primaries in 2000. Voters in Arizona were given the chance to cast their ballots in the Democratic party primary in Arizona (Done, 2002). Clearly, also, e-government will play a growing role in the implementation of public policy as an increasing array of public services are offered electronically. One example is public education, where both secondary and higher education are developing a range of applications to extend the accessibility of education (e.g., Kentucky Long-Term Policy Research Center, 2002). This suggests the desirability of exposing our students to a variety of analytical and application e-government issues in the public affairs curriculum

Environment, the components of which include:
- Political and legal institutions and processes
- Economic and social institutions and processes
- Organization and management concepts and behavior

Finally, it is likely that students will need to develop an understanding of how the political and legal institutions and processes, as well as economic and social institutions and processes shape and constrain the development of e-government while opening opportunities for applications. Organization and management concepts and behavior will also come into play and students will need to think about their applicability to e-government. For example, e-government applications will often develop in the context of strategic planning initiatives. Indeed, one could safely argue that strategic planning should be central in guiding e-government development. And, because e-government often challenges established practices and requires change in organizations, graduates of our programs will confront issues of how to change culture and behavior in organizations.

One Course or Throughout the Curriculum

How should we cover these instructional needs in the curriculum? Should we move toward the development of a single course that covers technical, managerial, and policy dimensions of e-government? That seems unlikely. While some programs might want to develop a course that provides an integrated approach to e-government technology, applications, management, and policy issues, particularly as part of a specialization in information management or e-government, most programs are unlikely to do that. Such courses would be useful for students who expect to be engaged extensively in e-government applications. It would be for them an integrating experience, tying together the various elements of the curriculum.

Given the multiple demands on the curriculum in a constrained time peri-
od, however, it is likely that most graduate public affairs programs will find it to be more productive to explore e-government across a range of courses in the existing curriculum. Public affairs programs are increasingly moving beyond teaching straightforward computer applications to providing students with a broader base of knowledge in information management. Indeed, a change to the NASPAA curriculum standards adopted at the organization's meeting in Los Angeles in October 2002 requires that programs go beyond computer applications. Many have developed required courses in information management. It is likely that e-government will be covered in these courses as they move beyond the development of information systems for internal use in government decision-making and management to their applications in public service delivery. In addition, courses throughout the curriculum can incorporate attention to e-government. Managing change in the development of e-government applications is presumably not different from managing change in other service delivery and organizational process. The use of the web to extend democracy can be part of a broader discussion of how to engage citizens more extensively and authentically in governance processes. Web applications are just one form of service delivery and should be discussed in the context of other forms. This can be done, for example, in courses on the implementation of public policy.

Institutional Settings and the Teaching of E-Government

The issue of how to incorporate e-government in the curriculum and prepare our students for the altered face of governance that it produces will play out differently in different programs. If we look across programs in the United States, it is likely to be affected by variations in resources, institutional setting, and faculty background and perspectives. For example, public policy programs, with their attention to policy issues and analytical methods, are likely to incorporate e-government differently than public administration programs with their attention to management and human resources. A faculty dominated by political scientists might be more likely to address issues of privacy and democracy, while a faculty dominated by economists might be more likely to address issues of cost-effectiveness and cost-benefit. Differences in the nature of the students in the programs are also likely to affect it. Larger, better endowed programs have taken more steps to incorporate information management in the curriculum, and they are more likely to act more aggressively to bring e-government considerations to their students.

If we think about this in international terms, we reach much the same conclusion. The incorporation of e-government in the curriculum is likely to be shaped by the broader social, economic, and political environments in which programs operate, government mandates or certification requirements, resources, institutional settings, and faculty backgrounds and perspectives. The stage of e-government development in the country is likely to make a difference, although we can also hope that our training will also shape e-government's development. Education of public affairs students for e-government is likely to be handled differently in China than it is in Bulgaria than it is in the United States. In all cases, however, we should be preparing our students to use e-government to serve our citizens more effectively and enhance the responsiveness and accountability of government.

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