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How information literacy becomes policy: An analysis using the Multiple Streams Framework

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Abstract

There is growing recognition that information literacy is a critical skill for educational and workplace success, engagement in lifelong learning, and civic participation. To be considered for allocations of financial and human resources, information literacy must become a policy priority for institutions and societies. Although there has been some progress in this area since 1974, when the term was coined, information literacy is not yet a priority for many organizations or governments.

There is no published examination of factors that may influence the adoption of information literacy as a policy priority. This paper explores aspects of the policy process from a U.S. perspective that can favor or impede the inclusion of information literacy on political agendas. It examines these questions through the Multiple Streams framework of policy processes. It proposes recommendations to help those who advocate for information literacy to effect policy changes. It identifies areas for research that would help information literacy policy advocates demonstrate need.

Introduction

This paper considers the introduction and adoption of information literacy as public policy from a U.S. perspective using the Multiple Streams framework. This framework consists of the triad of problems, policies, and politics.

Public policy-making consists of processes that include the setting of an agenda; the identification of alternatives from which a choice can be made; an authoritative choice among those alternatives; and the implementation of a decision (Kingdon, 2003). An agenda is "the list of subjects or problems to which governmental officials, and people outside of government closely associated with those officials, are paying some serious attention at any given time" (Kingdon, 2003). Several factors may influence agendas:

- The political events that are currently prominent (Zahariadis, 1999)

- Compelling societal problems (Zahariadis, 1999)

- The positions of elected officials (Zahariadis, 1999)

- Policy specialists, who generate policy proposals as they gain new knowledge and perspectives (Kingdon, 2003)

- Changes in national mood and public opinion (Kingdon, 2003)

- Changes in governmental administration and turnover in Congress (Kingdon, 2003)

The public policy process is dynamic and complex. "Policymakers frequently face dynamic and shifting environments where ambiguity is rampant and where decision outcomes appear to be beyond anyone's control. Complexity, fluidity, and fuzziness are particularly appropriate characterizations of policy-making at the national level" (Zahariadis, 1999). There are several reasons that the process is complex. It consists of many people and groups from a variety of sectors including government agencies, legislatures, research, journalism, and the public. They have differing values, interests, perceptions, and preferences. Many existing or proposed programs are related; a policy change would, therefore, have an impact on them. "A final complicating factor in the policy process is that most disputes involve deeply held values/interests, large amounts of money, and, at some point, authoritative coercion" (Sabatier, 1999). Studies focused on the policy process in the U.S. indicated that it usually took at least ten years (Sabatier, 1999).

There has not yet been an examination of policy factors that may influence the adoption of information literacy as a public policy priority. What aspects of the policy process can favor or impede the inclusion of information literacy on political agendas? This paper will examine this question through one political science framework. It will propose

recommendations to help those who advocate for information literacy to effect policy changes. It will propose areas for research.

A framework helps to identify the elements of a situation or problem and their relationships. "Frameworks organize diagnostic and prescriptive inquiry…They attempt to identify the universal elements that any theory relevant to the same kind of phenomena would need to include. Many differences in surface reality can result from the way these variables combine with or interact with one another. Thus, the elements contained in a framework help analysts generate the questions that need to be addressed when they first conduct an analysis" (Ostrom, 1999). This paper draws on the Multiple Streams Framework to better understand the policy process in relation to information literacy. This understanding can be a foundation for effective action in the future and can stimulate needed research.

Multiple Streams Framework

In the study of public policy formation in the United States, the Multiple Streams framework is one of the most popular and provocative (McLendon, 2003). Its origin was the organizational theory of March (cite). It can be helpful in explaining why policies gain importance on agendas or languish (Zahariadis, 1999). Multiple Streams has been used to explain such public

policy issues as reading (Young, Shepley, and Song, 2010); merit aid (Ness, 2010); lottery scholarships (Ness and Mistreta, 2009); college student retention (Brown, 2007); and school sports (Houlihan, 2006). The only known application of Multiple Streams in library and information science was an examination of the policy development of the ERIC and MEDLINE databases (Weiner, 2009).

Multiple Streams differs from other theories of the public policy process in that it can describe relationships between policy issues and their environment, but also looks for causal linkages (McLendon, 2003). The Multiple Streams framework "suggests multifaceted processes in which problems, ideas, and politics combine with choice opportunities to move issues onto the decision agenda of the national government" (McLendon, 2003). This framework can apply to a wide variety of policy arenas (Sabatier, 1999) and can be useful for describing how policies are made when there is ambiguity, lack of clarity, and lack of self-interest. The Multiple Streams framework can help to develop strategies (Zahariadis, 1999).

Problems, Policies, and Politics Streams

Kingdon identified three streams that flow through the political system: problems, policies, and politics. They are separate from each other and have individual dynamics and rules (Kingdon,

2003). Policymakers pay attention to **problems** because they learn about certain conditions. For instance, indicators can reveal that there is a problem and they can measure change in a problem. Evaluation studies and letters from constituents that provide feedback about existing programs can draw attention to a problem. Classifying a situation as a problem involves interpretation, perception, value judgments, and beliefs (Zahariadis, 1999).

The essential aspects of ideas that become **policies** are that they are technically feasible and that the values they represent are acceptable to policymakers. Ideas undergo a vetting process through discussion, papers, and hearings. During this process, an idea may change, couple with another idea, or disappear (Zahariadis, 1999).

The **politics** stream consists of the national mood, pressure group campaigns, and administrative or legislative turnover (Zahariadis, 1999). Politicians can monitor the national mood through opinion polls or interest groups. Legislative or administrative turnover can affect agendas. "The combination of the national mood and turnover in government exerts the most powerful effect on agendas" (Zahariadis, 1999). Serendipity and politics can cause policies to change or be reversed, depending

on different combinations of problems, solutions, and politics (Zahariadis, 1999).

Merging the three streams of problems, policies, and politics can greatly increase the chance that policy makers will give an issue serious attention (Kingdon, 2003). Ignoring a stream can result in an unchanged agenda (Brown, 2007).

Agendas

For an issue to become an agenda, more than one stream needs to be joined at a critical point. These moments are called policy windows and are opportunities to focus attention on particular problems. Timing is crucial because it influences which problems, policies, or politics are in the forefront at any particular point. Windows can open in the problem stream or in the politics stream. They can be predictable or unpredictable and usually have limited duration. There are several reasons that windows might close:

- Policymakers might feel that they addressed the issue.
- No actions related to the proposed policy occurred.
- There was no alternative for making a decision about the policy.
- The people who caused the window to open no longer have power.

- A critical event has passed (Zahariadis, 1999)

Windows are an important means of raising the awareness of policy makers to potential agenda items. A window can open when a policy is successfully adopted in one political arena, such as a state. If the policy is perceived as successful or broadly popular, elected officials in neighboring jurisdictions may want to adopt that policy. Those who are seeking election may be receptive to these policies to show that they are responsive to public preference. Elected officials may want to be perceived as leaders in policy areas, and so may become interested in innovative policies (McLendon, Heller, and Young, 2005).

When windows open, policy advocates must invest "time, energy, reputation, money—to promote a position for anticipated future gain" (Kingdon, 2003). They must act quickly and be persistent. "They must be able to attach problems to their solutions and find politicians receptive to their ideas" (Zahariadis, 1999).

Alternative Policies

Policy decision-makers may choose to select one policy from a range of related policies. The length of time it takes to generate alternative policies can range from incremental to rapid. Policy communities are networks, or "constellations of

actors and their action in a policy sector" (Zahariadis, 1999).
The networks are linked to a greater or lesser degree. Less
integrated networks tend to have breakthrough policies that are
not "softened" through the process by modifying their tenets.
More integrated networks tend to adopt new ideas through a
longer time period or bring "softened" ideas to the forefront in
a rapid manner (Zahariadis, 1999).

Role of Research and Information

Research and information are part of the policy process, but not
in a deliberate, methodical way. "Studies of policy-making do
suggest that it is not a linear rational-analytical process of
examining all the evidence, 'reading off' the policy
implications of this and then formulating well-designed
interventions guaranteed to achieve the outcomes
desired…research is only one factor among many competing
elements in this process" (Locke, 2009). Wong identified three
disincentives for policy makers to use research in their
decision-making. Those are:

- The nature of pluralist democracy. Research and expert
  influence have some influence, but so do the opinions of
  interest groups and personal political allegiances and
  beliefs.

- The policy making cycle. Research takes time, and the conduct of studies often doesn't align with a pressing need for convincing research findings.

- Federalism. Gaining access to data on a local or individual level often poses challenges for researchers.

- Intra-organizational politics. Governmental units vie for power, resulting in instability in the research agenda and uncertain commitment to funding (Wong, 2008).

Those involved in using information for agenda-setting may choose to be selective about the evidence they use, to misrepresent opponents' positions, or distort situations to their advantage (Sabatier, 1999).

When examining research, policy makers prefer findings that have practical consequences. They prefer quantitative over qualitative studies. "Research is helpful if it defines a problem or shows that it is worsening and needs action; identifies relationships between apparently unrelated problems; demonstrates the importance of support among the population for change; critiques current and previous attempts to solve a problem; comments on the implementation of proposed policy options; points out unexamined issues and gaps in the proposals; investigates the impact of the policy and any unintended, and especially, undesirable consequences" (Locke, 2009).

Information also has a role in policy making. Those involved in policy "have limited time and capacity and they use information, especially statistical information, to simplify, rationalize, and explain their beliefs for policy options" (Shakespeare, 2008). One study of how information higher education policy makers use information found that different coalitions used different information sources. People within coalitions used different information sources, too. Different coalitions used the same information for different purposes. Groups had varying access to information, for instance, "those outside of the legislative process (unions, independent and proprietary institutions, and student and public interest groups) did not have the same access to the information that the executive, legislature, and public institutions did" (Shakespeare, 2008). The study found that time limitations and personal bias had an influence on information use. Constituency groups are a source of information (Shakespeare, 2008).

Discussion

This section applies the Multiple Streams framework to some of the significant policy events related to information literacy in the U.S. and internationally.

Linking an issue with those that are already prominent on agendas can raise awareness and propel the issue forward

(Gibson, 2004). Information literacy has been coupled with major **problems** in the policy arena. These are major societal issues that require multi-faceted and systemic solutions. They include:

- Educational reform from pre-school through higher education
- Workplace readiness of graduating students
- Lifelong learning
- An informed citizenry
- A globally competitive workforce

A number of reports have included information literacy as a necessary strategy for addressing these problems. A report issued by the U.S. National Commission on Libraries and Information Science (NCLIS), the National Forum on Information Literacy (NFIL), and the United Nations Education, Scientific, and Cultural Organization (UNESCO) linked information literacy with information and communication technologies, reducing inequities in countries and among peoples, promoting tolerance, closing the digital divide, and a competitive workforce. It related information literacy to the "Education for All" program of the United Nations (Thompson, 2003).

A 2006 report from UNESCO, NFIL, and the International Federation of Library Associations (IFLA) related information literacy to competitive advantage, economic development, lifelong learning, critical thinking, fulfilling the goals of

the Millennium Declaration and the World Summit on the Information Society, and the empowerment of individuals and societies (Garner, 2006). A report from NFIL, OED, ETS, the Institute for a Competitive Workforce, and the National Education Association, tied information literacy as a global issue to competitive advantage, lifelong learning, and workforce preparedness (Perrault, 2006). President Obama and past member of the House of Representatives Major Owens linked information literacy to an informed citizenry (Obama, 2009; Owens, 1976).

A pivotal report published by ACRL (Association of College and Research Libraries) in 1989 is the foundation for information literacy in education today (ACRL, 1989). This report was the result of a committee formed by Dr. Patricia Senn Breivik when she was President of ACRL. The policy process streams of **problems** (information explosion and a critical need to have the ability to find and use information effectively) and **politics** (the election of a strong information literacy proponent to a national office) merged at a point in time that created a window for placing information literacy on a policy agenda.

On the national level, President Barack Obama's declaration of October 2009 as National Information Literacy Awareness Month resonated around the world. This happened as a result of

advocacy efforts led by Dr. Lana Jackman, President of NFIL.

Obama stated, "We dedicate ourselves to increasing information

literacy awareness so that all citizens understand its vital

importance. An informed and educated citizenry is essential to

the functioning of our modern democratic society" (Obama, 2009).

This policy happened as a result of the **problem** of the

availability of an overwhelming amount of information and

politics (the election of Obama, Senator Edward Kennedy, and

Senator Richard Lugar; Kennedy and Lugar both advocated in a

bipartisan effort to Obama for the declaration).

One way that issues can become agendas is through policy

diffusion. Diffusion can happen when policies are popular or

innovative (McLendon, et al., 2005). An example of a policy

innovation that could be adopted by other states is California's

Executive Order S-06-09. With this 2009 Order, then Governor

Arnold Schwarzenegger supported the need for Information and

Communications Technologies (ICT) and digital literacy. The

order stated that ICT digital literacy "is a defining component

of California's competitiveness for a knowledge-based economy

and is growing in importance to attract capital investment that

will generate higher quality jobs" (Schwarzenegger, 2009). The

executive order called for the establishment of an Advisory

Committee that would develop an ICT Literacy Digital Literacy

Policy to address digital literacy in California citizens.
Subsequently, California received $173.3 million from the U.S.
Department of Commerce National Telecommunications and
Information Agency in American Recovery and Reinvestment Act
grants. The Governor stated, "Given our state's strong
commitment to broadband advances, California is helping lead the
way in broadband applications for public safety, telemedicine
and digital literacy for all Californians. These projects will
turn the digital divide into digital opportunities for our
students, our workforce, the disadvantaged and our first
responders" (Gov. Schwarzenegger, 2010). Information literacy
rose to a policy agenda in this situation because of the
problems of economic competitiveness and the digital divide
(expressed as a policy alternative, i.e., digital literacy), and
the **politics** of an elected official who adopted the policy.

These are developments in policies related to information
literacy on which other policy advocates can build.

Alternative Policies

Policy alternatives can evolve when advocates form coalitions
with related groups. The ACRL Presidential Committee on
Information Literacy recommended the formation of such a group
in 1989. It became the National Forum on Information Literacy.
NFIL is a coalition of organizations "dedicated to the global

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integration of information literacy" (Weiner, 2010). The Forum deliberately reaches out to government, healthcare, business, and education organizations outside of libraries to promote information literacy and to provide opportunities for coalition-building and networking. These goals of NFIL revolve around policy issues:

- "To promote societal integration of information literacy as central to U.S. competitive advantage in the world marketplace
- To advocate for the importance of information literacy in preparing citizens for active involvement in a democratic society
- To collaborate with local, state, national, and international organizations associated with information literacy and lifelong learning" (Weiner, 2010)

NFIL promotes information literacy, but also areas that can be considered policy alternatives: critical thinking and lifelong learning. The University of California included agendas that are "alternatives" to information literacy in its report of working groups of the Commission on the Future of the University of California. Those alternatives are critical thinking ability and written communication (University of California, 2010).

Table 1 is a timeline showing information literacy policy milestones in the U.S. It includes the dates when many national organizations adopted information literacy into pivotal documents and standards.

Recommendations for Effecting Policy Changes

The recommendations described in this section are derived from the description of information literacy policy as viewed through the lens of the Multiple Streams framework. The purpose of these recommendations is to help those who advocate for information literacy to effect policy changes.

The Prague report identified some of the barriers to policy changes. It can be difficult to measure the impact of information literacy projects because many are short-term and specialized. The environmental factors connected with information literacy are multiple and complex, resulting in methodological issues in determining its role in causing beneficial results. Lastly, there is a consistently lack of funding and resources (Thompson, 2003). Some ways to overcome these challenges are to raise awareness of information literacy with politicians, the media, and the public. Well-designed large-scale and generalizable studies of the impact of information literacy and of the need for information literacy might be funded through government agencies and private

foundations. These would supply critical indicators that might move information literacy onto policy agendas.

The policy process is complex and non-linear, but it is critical for researchers and stakeholders to understand (Brown, 2007). "Understanding the policy process requires a knowledge of the goals and perceptions of hundreds of actors throughout the country involving possibly very technical scientific and legal issues over periods of a decade or more when most of those actors are actively seeking to propagate their specific "spin" on events" (Sabatier, 1999). It involves paying attention to the role that debates play in legislative hearings and litigation in the process. The debates involve technical "disputes over the severity of a problem, its causes, and the probable impacts of alternative policy solutions" (Sabatier, 1999). Those who advocate for information literacy on a policy level can continually develop their knowledge of the policy process; use networks to engage those who have related interests; and maintain an awareness of related research and industry reports.

Advocates should be receptive to coupling information literacy with other reform agendas (Gibson, 2004). Policy advocates can link information literacy with other policies or problems. Those who couple issues successfully are:

- Well-connected and persistent

- Holders of higher administrative or partisan positions

- Members of multiple arenas or institutions

- Willing to spend considerable amounts of resources (time, energy, money, etc) to make their ideas and proposals palatable to policymakers

- Present at critical meetings (Zahariadis, 1999)

Education reform and workforce readiness are high priorities, and information literacy should be included as a key competency to achieve those goals. "Many stakeholders at all levels of education have an interest in, and the expertise to promote, information literacy…information literacy has become the connective tissue that binds student learning, faculty and teacher development, community partnerships, and societal change" (Gibson, 2004).

The Prague Report provided recommendations for information literacy policy. They include:

- Demonstrate the importance of information literacy to competitive and sustainable economies.

- Establish agendas on workplace competency to include the benefits of information/knowledge as a key resource and asset.

- Provide incentives to governments, to invest in information literacy programs to enhance workforce effectiveness; and

to employers and unions, to invest in information literacy programs.

- Include information literacy training in overseas development aid programs and in national economic development programs (Thompson, 2003).

Advocates should watch for opportunities to link issues from the policy streams. "An issue's chances of gaining prominence in the agenda are enhanced when problems and solutions or solutions and politics are joined. The issue's chances dramatically increase when all three streams—problems, policies, and politics—are coupled in a single package" (Zahariadis, 1999). An example might be the **problem** of education reform linked with the **policy** of health care reform, linked with the **politics** of changing elected officials. If there should be a new legislator who campaigned for education reform, and has an appreciation for the importance of health care information in the prevention of disease, that legislator might be receptive to including health and other literacies in education reform programs.

An area in which these three streams coupled is information literacy in the accreditation standards for institutions of higher education. A 2007 study of the standards from the six regional accreditation organizations in the U.S. found that all

placed a high value on the skills associated with information literacy (Saunders, 2007). Ralph Wolff, Director of one of these organizations (the Western Association of Schools and Colleges) commented that all of the regional organizations agreed that student learning is central to accreditation. Wolff believed that "has significant implications for addressing information literacy" (Wolff, 2006). This is an example of the linking of the three streams of a **problem** (student learning), **policy** (updates of accreditation standards), and **politics** (leaders of accreditation organizations as advocates for information literacy in its variant forms.

Those who advocate for information literacy need to learn how to communicate effectively with policy makers. Policy makers communicate through argument, persuasion, and reasoning (Zahariadis, 1999). They use research and information, but experience overload from too much information (Birnbaum, 2000). The Alexandria and Prague reports and the report of the 2006 Information Literacy Summit are short, concise documents suitable for policy makers about the value and importance of information literacy (Garner, 2006; Thompson, 2003).

Research and information have a role in the policy process. But they must be concise and practical; help to define a problem or show that it is worsening; or identify relationships between

unrelated problems. Those who prepare such reports must show that the constituency supports change and must critique other attempts to solve a problem. They should ensure that the research findings are accessible to the policy makers (Locke, 2009). Reports should clarify the long-term positive and negative effects of a policy (Brown, 2007). Individuals or groups can be hired to prepare information literacy briefs that can be widely disseminated.

The Alexandria report provided recommendations for policy makers for follow up. The recommendation for holding meetings around the world to facilitate the adoption of information literacy and lifelong learning strategies (Garner, 2006) was accomplished in 2008-2009 CITE. The report also recommended:

- Professional development for personnel in education, library, information, archive, and health and human services in the principles and practices of information literacy and lifelong learning
- The inclusion of information literacy in education for key economic leaders, government administrators, and advisors to business, industry, and agriculture
- Programs to increase the employability and entrepreneurial capacity of women and the disadvantaged, including

immigrants, the underemployed and the unemployed through information literacy

- The inclusion of lifelong learning and Information Literacy in accreditation standards for education programs (Garner, 2006).

Another strategy is to engage those who are in mid-level positions to discuss research, policy, and practice. This can influence perspectives and agendas (Locke, 2009). Advocates can organize forums of experts that bring researchers, policy-makers, managers, administrators, and practitioners together. "Brainstorming workshops leading to the identification of themes, the definition of issues, agreement of research questions and a bundle of projects to answer these within a coherent and integrated research programme and a forum to consider the interconnections between themes and to undertake foresight work" (Locke, 2009).

Since indicators can reveal a problem and measure change in a problem (Catts and Lau, 2008; Zahariadis, 1999), there is a need to develop indicators of information literacy beyond those developed by for education settings (ACRL, 2000; AASL, 2007). Information literacy is a factor not only in education, but also in work, society, education, and well-being (Garner, 2006). UNESCO provided a conceptual framework paper on developing

information literacy indicators that is applicable globally and to all of these sectors. Catts and Lau recommend identifying indicators of information literacy through conducting secondary analyses of existing international surveys (Catts and Lau, 2008).

Recommendations for Research

Research that informs public policy must be rigorous and well-designed to have credibility. Promotion and publicity about that research needs to be effective. Research questions should be understandable and useful to a broader community and scholars. Research should improve theory or policy paradigms. The conduct of studies should be transparent and meet scientific standards (Wong, 2008). These recommendations for research identify areas that would amplify the case for the information literacy agenda:

- Systematic reviews of the literature (Locke, 2009)
- How policy advocates can be effective given the inherent ambiguity (Zahariadis, 1999)
- The process of forming and implementing policy (Zahariadis, 1999)
- The impact of information literacy on economic development, including cost benefit and value analysis of workplace information literacy programs (Thompson, 2003)

- The impact of information literacy in profit and non-profit organizations and NGOs/Civil Society Organizations (CSOs) (Thompson, 2003)

- The relationship between information literacy and entrepreneurship (Thompson, 2003)

- Cross-state, longitudinal analysis of the determinants of postsecondary policy (McLendon, et al., 2005).

Conclusion

This paper explored information literacy policy through the lens of the Multiple Streams framework. Although focused primarily on the policy process in the U.S., the principles may be applicable to other nations. The successful strategies employed can be continued and combined with new or improved strategies based on this work. This will increase the prominence of information literacy for those who have roles in influencing policy. Research in the areas identified will strengthen the evidence base for promoting an information literacy policy agenda.

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TABLE 1. Timeline of Selected Information Literacy Policy Milestones in the U.S. (adapted from Weiner, 2010)

1989   Association of College and Research Libraries (ACRL) issued the report of Presidential Committee on Information Literacy

1993   The Middle States Association of Colleges and Schools Commission on Higher Education promoted information literacy as an essential undergraduate learning outcome.

1994   The American Association of School Librarians adopted national standards on information literacy.

1997   The National Education Association made a commitment to embed information literacy in their teacher education initiatives.

1998   The American Association of School Libraries and the Association of Educational Communications and Technology published Information Literacy Standards for Student Learning for students in K-12.

1999   The American Association of Higher Education (AAHE) endorsed the ACRL Information Literacy Competency Standards for Higher Education.

2000 The ACRL adopted the ACRL Information Literacy Competency
     Standards for Higher Education.

2003   NFIL, UNESCO, and NCLIS held the first international
     information literacy experts meeting in Prague, resulting
     in the Prague Declaration (http://portal.unesco.org/ci/
     en/files/19636/11228863531PragueDeclaration.pdf/PragueDecla
     ration.pdf).

2004   The Council of Independent Colleges endorsed the ACRL
     Information Literacy Competency Standards for Higher
     Education.

2004   The Partnership for 21st-Century Skills identified
     information literacy as a key student learning outcome.

2005   UNESCO/IFLA/NFIL sponsored a symposium of information
     literacy experts in Alexandria, Egypt, producing the
     Alexandria Proclamation (http://portal.unesco.org/
     ci/en/ev.php-URL ID=20891&URL DO TOPIC&URL
     SECTION=201.html).

2006   NFIL organized the first U.S. Summit on Information
     Literacy .

2008   The Higher Education Reauthorization Act of 2008
     included information literacy as a necessary skill for
     teacher professional development.

2008   The American Association of Community Colleges

published a position statement on information literacy

(http://www.aacc.nche.edu/About/Positions/Pages/ps05052008.

aspx).

2008   The National Council of Teachers of English included

information literacy skills in its Framework for 21st-

Century Curriculum and Assessment (http://www.ncte.org/

library/NCTEFiles/Resources/Positions/Framework 21stCent

Curr Assessment.pdf).

2009   President Barack Obama signed a proclamation to

dedicate October as National Information Literacy Awareness

Month.

2009   California Governor Arnold Schwarzenegger issued

Executive Order S-06-09 to establish an Information and

Communications Technology Digital Literacy Policy.