

Democracy and the Knowledge-based Society

CLIENT: Caribbean Policy Development Centre
P.O. Box 284
Bridgetown
BARBADOS
<http://www.cpdngo.org>

CLIENT CONTACT: Cecilia Babb
Executive Coordinator
Tel: (246) 437-6055
Email: ock@caribsurf.com

PRIMARY CONTACT: Troy Weekes
ezLearner, Inc.
Tel: (246) 233-5691
Email: troy@ezlearner.com

DATE: November 3, 2009

TABLE OF CONTENTS

TABLE OF CONTENTS	i
INTRODUCTION	1
OBJECTIVES	1
MODULE ACTIVITIES.....	2
KEY CONCEPTS.....	3
Knowledge Society	4
Knowledge Economy	4
Knowledge Divide	5
Electronic Democracy	5
Electronic Government.....	6
Electronic Business	7
Activity – Application of Electronic Democracy	7
DEMOCRATIC PRINCIPLES OF THE KNOWLEDGE SOCIETY	8
Freedom of Expression.....	8
Equal Access to Education	9
Universal Access to Information	10
Cultural Diversity	10
Activity – Role Playing	11
THE WORLD WIDE WEB AND ITS ENABLING ENVIRONMENT	12
The Basic Web Environment.....	12
The Hypertext Markup Language	13
The Web Browser	13
Internet Service Providers	13

Legal Aspects of the Web Environment	13
CONNECTING THE DEMOCRATIC KNOWLEDGE SOCIETY	14
Social Networks	14
Blogs, Microblogs and the Blogosphere	15
Wikis.....	16
RSS or Really Simple Syndication	16
IM or Instant Messaging.....	16
Virtual Worlds	17
Activity – Online Debate.....	17
Citizen Usage of the Technology.....	18
Government Portals and Online Services	20
Activity – Knowledge Society Index.....	23
DEMOCRATISATION AND TECHNOLOGY CHANGE	24
Two-Systems Problem – Electronic vs. Traditional	24
Bureaucratic Fragmentation.....	25
Budgetary Resources.....	25
Group Conflict and Outsourcing	26
Leadership, Partisan Conflict, and Media Coverage.....	27
Activity – Opinion-based Exchange.....	28
CONCLUSION	29
BIBLIOGRAPHY	30
SUGGESTED READINGS	34

INTRODUCTION

This module is intended to be an introduction to technological advances that give rise to knowledge societies and electronic democratic practices. It serves as a training programme for young political leaders of CARICOM. This module seeks to ensure that young political leaders are familiar with the evolution and development of democratic practices in Caribbean societies involving the integration of various technologies into the democracy process. In knowledge societies, citizens are empowered with equal access to education, universal access to information and an unprecedented freedom of expression. Young political leaders are given an opportunity to apply knowledge society concepts in order to enhance democratic practices and optimise the political functions of the future.

This module of the online democracy course will follow the proposed structure.

1. Knowledge society definitions will be outlined and briefly discussed.
2. Democratic principles of the knowledge society will be presented.
3. The World Wide Web and its enabling environment will be introduced.
4. Issues influencing citizen usage of electronic systems will be examined.
5. The process of technology change will be explored and its constraints analysed.

OBJECTIVES

At the end of this module, participants should be able to:

1. Define key concepts and terminology in 21st century knowledge societies;
2. Explain the online Web environment in the political and legal contexts;
3. Apply Web 1.0 and 2.0 applications that benefit the knowledge society;
4. Describe common Government-to-Citizen interactions using ICTs;
5. Analyse the major constraints on technology change and transfer.

MODULE ACTIVITIES

The following activities inspire creative thinking and reinforce the content.

1. **An application of electronic democracy:** Participants will be asked to propose their own meaning and application(s) of electronic democracy that best captures the meaning from their subjective experiences.
2. **Role playing activity:** Participants will be asked to play the role of a regional Minister of Government supporting Internet Censorship legislation, while others will play the role of civil society defending and promoting freedom of information.
3. **An online debate:** Is “electronic knowledge sharing” appropriate to assist in solving illiteracy, poverty, economic underdevelopment and gender bias with reference to the civil society, communities, nations and the Caribbean region?
4. **A Knowledge Society Index game:** Participants will be asked to rank the countries of the English-speaking Caribbean along a Knowledge Society Index (KSI). Participants will utilise research to define their own ranking criteria, which must be justified. Similarly, participants will be asked to defend and justify their KSI table.
5. **An opinion-based exchange:** Participants will be asked (a) to identify the most significant constraint on technology change in the English-Speaking Caribbean, and (b) to formulate a solution to overcome the constraint within the Caribbean context.

KEY CONCEPTS

This section focuses specifically on exploring the meaning of the knowledge society and the key concepts enabling the electronic evolution of democracy. The aim here is to expose participants to the democratic values underlying the purpose of the knowledge society. In the end, participants will be asked to describe a conceptual application of electronic democracy. This activity allows participants to engage with the key concepts and apply unique perspectives to electronic democracy based on their personal experiences.

There are a number of concepts which are critical to understanding a democratic knowledge society. These concepts describe how individuals and organisations express their opinions on socio-economic issues, civil liberties, etc. and participate in public life. Moreover, these concepts describe how the lives of citizens can be enriched by the ability to interact within virtual societies among actors representing governments and businesses.

These key concepts include:

- Knowledge society
- Knowledge economy
- Knowledge divide
- Electronic business
- Electronic government
- Electronic democracy

While the above concepts are important to understanding the knowledge society, it is essential that democratic principles be enshrined within the lifecycle of the technology. This approach ensures that the society will benefit from use of the ICT over time.

Knowledge Society

YouTube is a prime example of a knowledge society. It is an online workspace where people create, share and consume video-based knowledge for the prosperity and welfare of themselves and other people. Generally speaking, the term knowledge society refers to any society where knowledge is the primary production resource instead of capital and labour. Knowledge societies are regularly involved in democratic functions. For example, groups of social advocates share knowledge within online networks in order to promote particular causes or specific social goals that benefit specific constituencies. This knowledge gets converted into social capital of the particular constituency or society.

What empowers knowledge societies is the ability of current technologies to eliminate constraints such as geographic proximity and time zone. The Internet and Web technology offers limitless innovations to communicate, share and access knowledge. Today, post offices, even though far from obsolete, would be overwhelmed by the volumes of daily e-mail that are automatically archived and delivered. The value of the knowledge society lies in utilizing technology in order to harness the power of knowledge.

Knowledge Economy

In a knowledge economy, people produce, exchange, distribute, and consume knowledge goods and services. Caribbean economies are transitioning to from natural resources towards knowledge and service-based economies. Under this recent development, many politicians and social leaders have been employing information and communication technology to manage their knowledge. Offshore finance in Caribbean economies has become an important foreign exchange earner as well as information services from human capital assets. Medical transcriptions and data-entry services are some significant examples of such knowledge goods and services.

In the knowledge economy, there are various interlocking driving forces that constantly change the rules of business and national competitiveness. Markets and products are becoming more global. Wireless networks, mobile phones and Broadband

Internet are bringing the “global market” nearer faster. The efficient production of high quality goods and services relies more heavily on access to specialised research. Some knowledge societies are making it easier to gain free access to information. However, amid these advancements, there is an uneven diffusion of the technology across socio-economic classes resulting in an undesirable social phenomenon known as the knowledge divide.

Knowledge Divide

As the knowledge economy gained distinction in research interests, it became noticeable that an enormous knowledge divide exists between rich and poor countries. The knowledge divide was soon to be identified as the main pitfall of knowledge economies. The knowledge divide represents the gap in living conditions between those who can access and process knowledge, and those who cannot. Within countries, the knowledge divide is observed along dimensions of gender, race, ethnicity and social class.

The knowledge gap hypothesis states that as the infusion of mass media information into a country increases, segments of the population with higher socio-economic status tend to acquire this knowledge at a faster rate than the lower status segments, so that the gap in knowledge between these segments tends to increase rather than decrease. Throughout this module, participants will learn of how bridging the knowledge divide in underdeveloped countries and social classes can enhance democracy. The participant will be prepared to answer questions such as: How can Caribbean countries ensure that electronic government does not widen the knowledge divide? How can knowledge societies promote gender equality and offer equal opportunities across gender?

Electronic Democracy

Electronic democracy, also called e-Democracy, is a relatively new concept, which has surfaced out of the popularity of the Internet and the need to reinvigorate interest in the democratic process. It involves the use of information and communication technology (ICT) by democratic actors to execute political and governance processes within local

communities, nations and on the international stage. Democratic actors typically include government institutions, civil society, the media, political parties, citizens and voters.

Civic participation is vital in sustaining interest in the democratic process, and that is how e-Democracy promises to reverse the mistrust that citizens have in their governments. With the advent of social networks such as Facebook and MySpace, more citizens use the Internet to engage government agencies and keep abreast of public affairs. For example, in civil society, e-Democracy has been used for multiple functions including lobbying elected representatives and public officials; networking with related associations; mobilising activists and members using alerts, newsletters, and emails; raising funds and recruiting supporters; and communicating to the public using uncensored media.

Electronic Government

Electronic government, also called e-Government, refers to the use of ICT to provide and improve government services, transactions and interactions with citizens, businesses, and other arms of government. e-Government helps simplify processes and makes government information more easily accessible for public sector agencies and citizens.

Through the Internet, people from all over the country can interact with politicians and make their voices heard. Blogs, polls and online surveys allow social analysts to see the views of the people they represent on any given issue. Similar to radio call-in programmes, online moderated chat rooms place citizens in real-time contact with public officials, allowing voters to have an impact on their government.

Theoretically, a government could move more towards a true democracy with the proper application of e-Government. With e-Government, the public can make a direct influence in the government legislature. e-Government has the potential to create a more transparent government, allowing voters to see how their representatives are debating and voting, and to provide feedback to hold their representatives accountable for their actions.

Electronic Business

Electronic business, also called e-Business, refers to the use of ICT in support of the activities of business. It is recognised that e-Business is a powerful tool that can boost economic growth of developing countries. e-Business promises more business for small and medium enterprises (SMEs) and sustainable economic development. However, this is premised on strong political will and good governance, as well as on a responsible and supportive private sector within an effective e-Business policy framework.

The proliferation of modern ICTs and the harmonisation of international trade policy are fundamental to the future acceptance of e-Business. The knowledge society stands to benefit from e-Business since knowledge products and services can be seamlessly exchanged between business, groups and individuals. For example, society benefits from e-Business practises such as paying bills and transferring funds online. Many of these practices have become adopted widely since they eliminate the need to wait in lines and are available all day. The e-Business environment provides an opportunity to generate a new work ethic and modernise the democratic society.

Activity – Application of Electronic Democracy

Participants are asked to reflect on what they do to promote democracy. Following the development of a context of use, participants will then be asked to propose an application of electronic democracy that best captures the meaning from their subjective experiences.

DEMOCRATIC PRINCIPLES OF THE KNOWLEDGE SOCIETY

The social, political and economic dynamics at the heart of emerging knowledge societies offer a new and challenging environment in which young leaders must balance the civil and political rights against economic gain and profit. During the 2005 World Summit on the Information Society (WSIS), the concept of knowledge societies was emphasized as all-embracing and more conducive to empowerment than the concepts of technology and connectivity. This section delves into democratic principles of the knowledge society that project an empowering social vision, which encompasses plurality, inclusion and solidarity.

The UNESCO World Report 2005 is clear that knowledge societies should be firmly based on a commitment to human rights and fundamental freedoms, especially freedom of expression. These knowledge societies should also support democratic institutions and ensure the full realization of the right to education and of all cultural rights. In knowledge societies, access to the public domain of information for educational and cultural purposes should be as broad as possible providing high quality, diversified and reliable information. Particular emphasis should be given to the diversity of cultures and languages.

Freedom of Expression

Special prominence is given to freedom of expression as the fundamental premise of knowledge societies. As identified in Resolution 59 (I), adopted in 1946 by the United Nations General Assembly, “freedom of expression is a fundamental human right and the touchstone of all the other freedoms to which the United Nations are dedicated”. This democratic right is articulated in Article 19 of the 1948 Universal Declaration of Human Rights: “Everyone has the right to freedom of opinion and expression; this right includes freedom to hold opinions without interference and to seek, receive and impart information and ideas through any media and regardless of frontiers”.

This right is further guaranteed by the International Covenant on Civil and Political Rights, Article 19. Observance of this right reinforces the knowledge society through the absence of censorship or control over information, free circulation of data and information,

pluralism of the media and freedom of the press. It also requires that the fundamental rights of individuals are guaranteed, since they are essential for free participation in knowledge societies i.e. freedom of opinion and freedom of speech.

Freedom of expression and freedom of scientific research and artistic creation, so long as they are fully respected, constitute an assurance of building genuine knowledge societies. To emphasize freedom of expression is to underscore the spirit of openness and dialogue that governs relations between individuals and social groups within knowledge societies. Without it there can be no interchange or public debate. In the absence of freedom of expression, knowledge may still exist; however, there will be no knowledge sharing, or any knowledge society.

Equal Access to Education

Also at the core of the knowledge society is the basic right to education, which is rooted in many international human rights treaties since the Universal Declaration of Human Rights adopted in 1948. Access to education is a tool for combating illiteracy, marginalisation, poverty and exclusion. Without education, knowledge societies cannot exist. Education is the great capacity builder of all and with limited access to information the creation of knowledge is severely limited. The role of education is crucial.

Equal educational opportunity across all socio-economic classes in the society is vital to enable all children to participate in democratic processes. The World Education Forum held in Dakar, Senegal has reaffirmed education as a fundamental human right and underlined the importance of rights-based government actions in implementing Education for All (EFA) activities at the national level. The role of government and private partners in providing access to new learning methods and technologies is an important key to making the right to education a reality.

Universal Access to Information

Universal access to the information is in many minds the most important of these principles. It is implicitly embodied in the Universal Declaration of Human Rights, particularly Article 19 bearing on freedom of expression and Article 27 relating to freedom of access to information and protection of users' security and privacy.

Advances in computing and communications provide cost-effective ways to store books, sound recordings, movies, software packages, and public web pages. Knowledge societies provide access to these collections via the Internet to students and adults all over the world. Brewster Kahle², a digital librarian, estimates that the Library of Congress requires a total of 26 Terabytes for the 26 million books in its collection.

Paradoxically, public domain information, which is free of copyright and belongs to everybody, is often not well enough known to potential contributors and users because of lack of interest in promoting it, no direct profit being expected due its very "public" nature. In order to ensure effective management of and access to this knowledge, the principles of free access to information in the public domain will have to be defined and promoted through appropriate public policies and international agreements, and the necessary public service infrastructures such as digital libraries and archives appropriately developed.

Cultural Diversity

In the democratic framework, cultural diversity is conducive to cultural exchange and to the flourishing of creative capacities that sustain public life. The exchange of cultural information is not in itself sufficient to build genuine knowledge societies. Information must be compared, criticized, assessed and absorbed with the help of scientific research and philosophical enquiry, if everyone is to be able to produce new knowledge based on the flow of cultural information.

A key concept in this strategy is that of the electronic public domain. In the public domain, information free of copyright including classical literature, fundamental and indigenous knowledge, and the information and data of governments or produced with

public funds at the national and international levels. These archives represent a vast world documentary heritage that is accessible to all. For knowledge societies and public information users, in general, these archives have become interactive windows on cultures and an invaluable support for education and cultural industries in developing countries.

Activity – Role Playing

Participants will be asked to play the role of a regional Minister of Government supporting Internet Censorship legislation, while others will play the role of civil society defending and promoting freedom of expression and universal access to information.

THE WORLD WIDE WEB AND ITS ENABLING ENVIRONMENT

Many business executives made the statement “the Internet changes everything” during the late 1990s. One of the first people to say those words publicly was John Chambers, CEO of Cisco Systems. For his company, the Internet did indeed change everything. Cisco, founded in 1984, grew rapidly to become one of the largest and most profitable computer network companies in the world by 2000.

In order to effectively utilise advanced Web technology, participants should have a basic understanding of the Internet and the Web environment. The Internet is a large system of interconnected computer networks that span the globe. The part of the Internet known as the World Wide Web, or more simply, the Web, is a subset of the computers on the Internet that are connected to one another in a specific way that makes them and their contents easily accessible to each other. The most important thing about the Web is that it includes an easy-to-use interface called a Web browser.

This section delves into the Web applications that create an enabling environment for democracy in the knowledge society such as electronic mail, social networking, online newspapers, academic journals, electronic commerce, government transactions, and a variety of other resources. Even though the section focuses on the Internet and the Web, the Internet hardware backbone can facilitate intranets, extranets, public and private networks and virtual private networks as needed by specific democratic actors.

The Basic Web Environment

The Web environment is built from layers of technological infrastructure and services. The two important innovations that became key elements of the Web are hypertext and graphical user interfaces. At the basis of all Web applications is the hypertext server, which is a computer that generates files in hypertext markup language (HTML) and lets other computers easily connect to it and access its files. Hypertext servers used on the Web are called Web servers.

The Hypertext Markup Language

HTML was developed by Tim Berners-Lee. HTML is a language that includes a set of codes (tags) attached to text and various media files. One important type of tag is the hyperlink tag, which is a reference that points to another location in the same or another HTML file. The notion of hyperlinks is based on a freedom of association between any Web resources that is only restricted based on security and file compatibility.

The Web Browser

A Web browser is a software interface that allows users to read or browse HTML documents and move from one HTML document to another through text integrated with hyperlinks and multimedia elements. The Web browser presents an HTML document in an easy-to-read format in the graphical user interface (GUI). This winning technological formula has afforded the knowledge society its tremendous growth and globalization.

Internet Service Providers

Internet service providers are the companies that offer various types of connections to the Internet. Basic telephone connections are the most economical and easiest to install, but they are the slowest. Broadband cable, satellite microwave transmission and DSL services provide Internet access at relatively high speeds. Other, more expensive options provide the bandwidth that larger organisations need. A variety of wireless connection options are available for work and home. The wireless connection options through cell phones show promise in creating new opportunities for advancing democracy.

Legal Aspects of the Web Environment

The legal concept of jurisdiction on the Internet is still unclear and ill-defined. Seemingly innocent inclusion of photographs and other elements on a Web page can lead to

infringement of trademarks, copyrights, or patents; defamation; and violation of intellectual property rights. Websites in the knowledge society, especially e-Commerce sites, must be careful not to imply relationships that do not actually exist.

Web business practices such as collecting information and tracking consumer habits have led to questions of ethics regarding online privacy. Some countries are far more restrictive than others in terms of what type of information collection is acceptable and legal. Institutions that collect personal information online can use an opt-in policy or opt-out policy, in which consumers take action to permit or prevent information collection.

The international nature of all online business further complicates tax obligations. The large number of government agencies that have jurisdiction and the power to tax makes it essential that companies and organisations doing business on the Web understand the potential liabilities of doing business with customers in those jurisdictions.

CONNECTING THE DEMOCRATIC KNOWLEDGE SOCIETY

President Barack Obama created a broad grassroots movement and a new method of campaigning by courting activists, donations, and voters through the Internet. In 2008 candidates went even further to reach out to Internet users through their own websites and websites such as YouTube³, MySpace, and Facebook. It was part of a campaign that mobilized grassroots workers in every state. President Obama also set online fundraising records by gaining support from a record-breaking number of individual small donors⁴. The following list of Web applications presented here are useful in fostering democracy.

Social Networks

A social network is a social structure made of individuals and organisations, which are connected by one or more specific types of interdependency, such as friendship, kinship, financial exchange, dislike, sexual relationships, or relationships of beliefs,

knowledge or prestige. Therefore, most knowledge societies are social networks of people who form interdependencies through knowledge sharing.

Facebook and MySpace are popular networking websites. During the 2008 presidential election in the United States, candidates set up Facebook profiles, presumably in an effort to attract younger voters⁵. Caribbean politicians and social leaders have joined Facebook networks in recent times. They have added local and international friends to send them messages, and routinely update their personal profiles to notify friends about themselves and publicise their activities. Most profiles feature photos, blogs, videos, and ways for viewers to get involved with campaigning. Many political organisations have also created MySpace accounts to keep in touch with and expand their membership base. These range from larger organizations like the ACLU to smaller focused groups and activists.

Blogs, Microblogs and the Blogosphere

A blog is a special type of website that is maintained by an individual with regular entries of commentary, descriptions of events, or other material such as graphics or video. Entries are commonly displayed in reverse-chronological order. Twitter is an example of a hybrid between a social network and a microblog. It allows bloggers to send brief text updates or micromedia such as photos or audio clips and publish them, either to be viewed by anyone or by a restricted group which can be chosen by the blogger.

The collective community of all blogs is known as the blogosphere. Since all blogs are on the Internet by definition, they derive special benefits for democracy from being interconnected and socially networked, through blogrolls, comments and pingbacks. Popular discussions “in the blogosphere” are usually adopted by the media as a gauge of public opinion on various issues. Many bloggers engaged in participatory journalism and differentiate themselves from the mainstream media, while others are members of the media working through a different channel.

Blogs have been used to exhibit and debate controversial social issues. The main advantage of this medium of debate is that bloggers can preserve their anonymity and

protect their identity while making contributions that may be contentious. It is not unusual to observe changes in the positions of bloggers as issues develop over time. Such an environment cultivates democratic participation where bloggers do not feel challenged to share their opinions on public issues.

Wikis

Wikis are used by teams of democratic actors to provide a virtual space for knowledge management. The wiki is a special type of website that allows multiple users to easily create and edit a number of interlinked Web pages using a simplified text editor directly within the browser⁶. Wikis are often used to create collaborative websites, to power community websites, and for note taking. The online encyclopedia Wikipedia is one of the best-known collaborative wikis.

RSS or Really Simple Syndication

RSS is a family of web feed formats used to publish frequently updated works—such as blog entries, news headlines, audio, and video⁷. An RSS document which is called a “feed” includes summarised text and other information such as publishing dates and authorship. Civil society organisations may find RSS feeds useful for automatically syndicating content with other institutions. For example, organisations can subscribe to timely updates from favoured websites such as newspapers and radio stations. Readers can aggregate feeds from many sites into one place using an RSS aggregator. The feeds can then be read using RSS software that may be web-based, desktop-based, or mobile-device-based.

IM or Instant Messaging

Instant messaging is a collection of technologies that create the possibility of real-time communication between two or more participants over the Internet or some

form of computer network. IM allows effective and efficient communication, featuring immediate receipt of acknowledgment or reply.

Skype is a popular example of IM software. It is free for download and offers functions like file transfer, contact lists, and the ability to have simultaneous conversations. Like most modern IM applications, Skype provides additional features such as seeing the other party by using web-cams, or to talking directly for free over the Internet. From multinational corporate executives to social practitioners in the field, video conferencing is now as simple as launching Skype and selecting the option for communication.

Virtual Worlds

A virtual world is a computer-based simulated environment intended for its users to inhabit and interact via avatars⁸. The user accesses the computer-simulated world and receives perceptual stimuli. The user can manipulate elements of the modelled world and can therefore experience telepresence. Communication between users ranges from text, graphical icons, visual gesture, sound, and rarely, forms using touch and voice commands.

The number of people using virtual worlds has been increasing. Governments are beginning to interact in virtual worlds and have been discussing issues of governance in these worlds. Governments have researched into the ownership of virtual property by people. This is one aspect where governments have been trying to determine if it is viable or even feasible for to govern virtual worlds with taxes and laws⁹.

Activity – Online Debate

Participants are asked to engage in a persuasive debate on the democratic principles outlined in this section. The primary debate question: Is “electronic knowledge sharing” appropriate to assist in solving illiteracy, poverty, economic underdevelopment and gender bias with reference to the civil society, communities, nations and the Caribbean region?

Citizen Usage of the Technology

As shown in Figure 1, both individual adoption and institutional change are required for there to be widespread social and political ramifications of new technology. Individual adoption decisions are affected by one's ability to pay for new inventions, how favourable someone feels towards new technology, and the benefits that technology offers for day-to-day living.

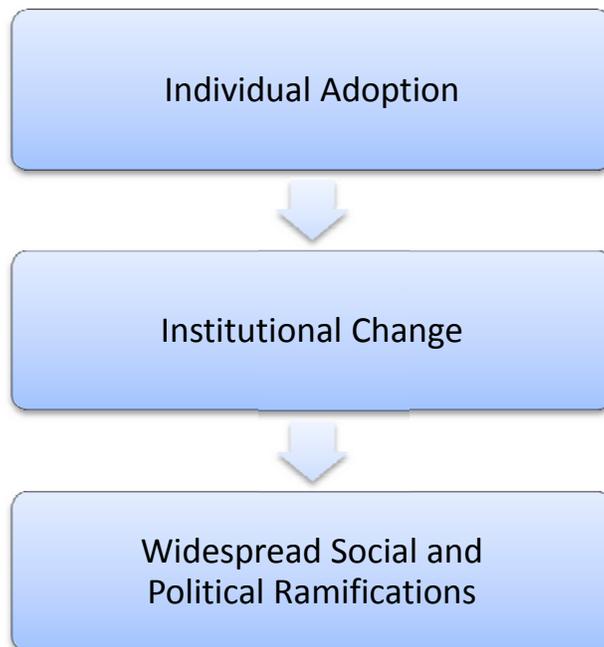


Figure 1 - A General Model of Technological Change

Source: Darrell West. (2005). Digital Government

For there to be widespread social and political ramifications, both individual and institutional forces must be moving in the same direction. Individuals must see advantages in terms of adopting technology and government institutions must have the resources, organizational incentives and leadership to transform the public sector. Even though the Internet is popular as an individual activity, many Americans employ it for non-political and non-governmental activities (see Figure 2 and Figure 3).

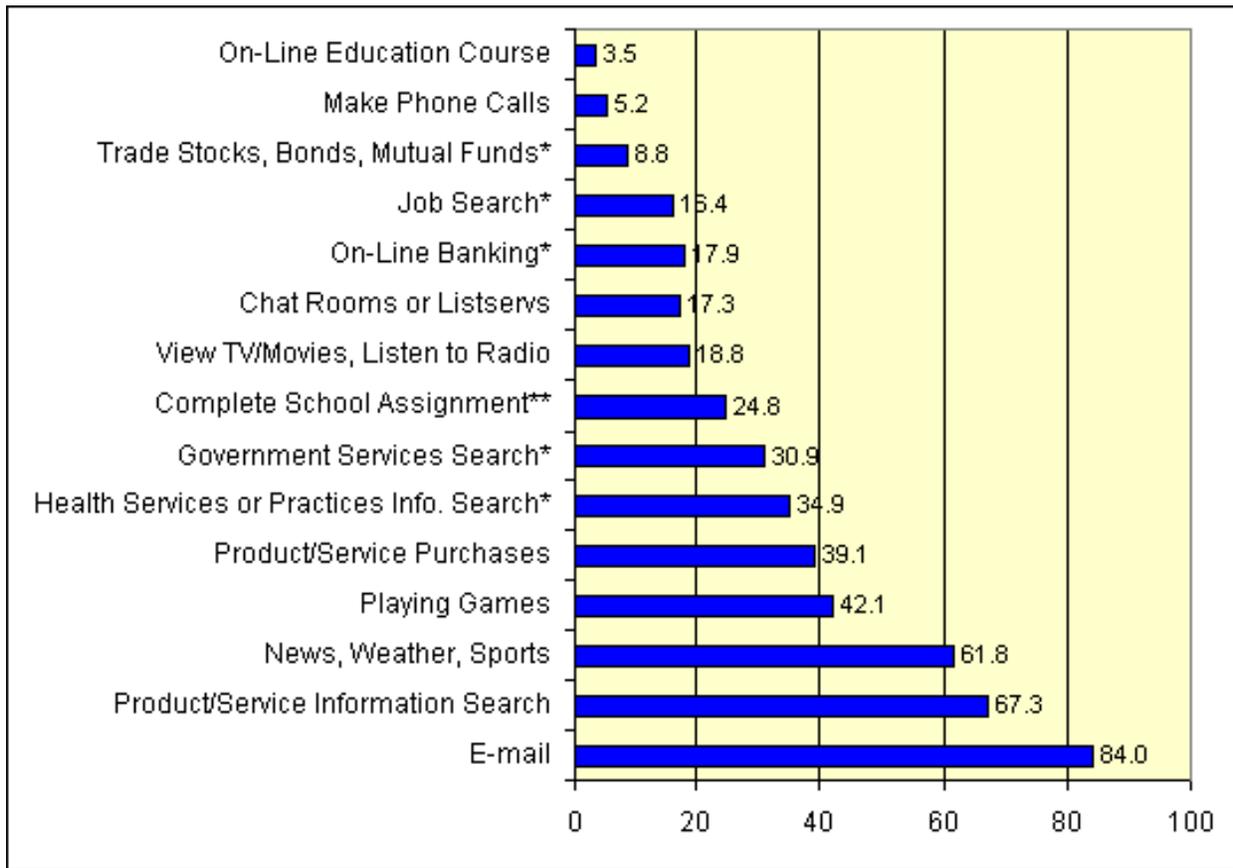


Figure 2 - Activities of American Individuals Online as a Percentage of Internet Users, 2001

Source: NTIA and ESA, U.S. Department of Commerce, using U.S. Census Bureau Current Population Survey Supplements¹⁰

Activity	American adults performing activity (percent)	Internet users performing activity (percent)	Home dial-up users performing activity (percent)	Home broadband users performing activity (percent)
Send or read e-mail	66	90	86	94
Use a search engine to find information	65	89	80	94
Check weather reports and forecasts online	58	80	75	84
Get news online	54	73	61	80
Buy a product online	48	66	59	74
Visit a local, state, or federal government web site	49	66	55	72
Buy or make a reservation for travel	47	64	51	72
Look for news or information about politics	40	55	37	62
Do any banking online	39	53	44	61
Watch a video on a video-sharing site	38	52	29	60
Look online for info about a job	35	47	36	50
Send instant messages	30	40	38	44
Get financial information online	26	36	32	40
Use online classified ads or sites like Craig's List	24	32	24	38
Rate a product, service, or person	24	32	28	36
Use a social networking site	21	29	21	33
Participate in an online auction	19	26	16	32
Make a donation to a charity online	14	20	9	23
Download a podcast for viewing it later	14	19	8	22
Create or work on your own online journal or blog	9	12	8	15

Figure 3 - Internet Activities of Adults, by Type of Home Internet Connection

Source: Pew Internet & American Life Project Surveys¹¹

Government Portals and Online Services

FirstGov.gov, now called USA.gov, is the original American national government portal, and is one of the most famous examples of a public/private partnership resulting in e-Government success¹³. This portal was first developed in 2000 by a private entrepreneur, Eric Brewer, who worked at Inktomi Corp., a website company. This public/private partnership approach allowed the United States government to get the portal up and running quickly without having to rely on government employees or go through a lengthy bidding process¹⁵. In the space of a few months, Brewer developed the portal and built links to “20,000 U.S. government Internet websites and 27 million pages of data.”¹⁶

According to research shown in Figure 4, several Caribbean countries provide easy access to the information and services for their citizens, businesses, Diaspora, as well as international community through single entry National Portals. Such portals acting as gateways to information and services from the government have emerged as the standard tool to interface e-Government initiatives with their intended beneficiaries. Some studied examples of Single Entry National Portals or Gateways include:

- Anguilla: <http://www.gov.ai>
- Antigua and Barbuda: <http://www.antigua.gov.ag>
- The Bahamas: <http://www.bahamas.gov.bs>
- Barbados: <http://www.barbados.gov.bb>
- Belize: <http://governmentofbelize.gov.bz>
- Cayman Islands: <http://www.gov.ky>
- Cuba: <http://www.cubagob.cu>
- Dominica: <http://www.dominica.gov.dm>
- Grenada: <http://www.gov.gd>
- Guyana: <http://www.gina.gov.gy>
- Haiti: <http://www.haiti.org>
- Jamaica: <http://www.e-jamaica.gov.jm>
- Montserrat: <http://www.gov.ms>
- St. Lucia: <http://www.stlucia.gov.lc>
- St. Kitts and Nevis: <http://www.gov.kn>
- St. Vincent and the Grenadines: <http://www.gov.vc>
- Trinidad and Tobago: <http://ttconnect.gov.tt/>
- Turks and Caicos Islands: <http://www.tcgov.tc/>

FEATURES OF CARIBBEAN E-GOVERNMENT GATEWAY OR PORTAL WEBSITES

COUNTRY	Policy on website	Mnemonic URL	Links to Govt websites	Site Map	Search	Govt Directories	Colour & Design	e-Gov Forms	Privacy & Security	Full-text Docs	Online Transaction	Consultation
Anguilla	✓	X	✓	✓	✓	✓	✓	X	X	✓	X	X
Antigua & Barbuda	✓	✓	✓	X	X	✓	✓	✓	✓	✓	X	X
The Bahamas	X	✓	✓	✓	✓	✓	✓	✓	X	X	X	X
Barbados	✓	✓	✓	X	X	X	X	✓	X	✓	✓	X
Belize	X	✓	X	X	✓	X	✓	X	X	✓	X	X
Cayman Islands	X	X	✓	X	X	✓	✓	✓	✓	✓	X	X
Cuba	X	✓	✓	X	X	X	X	X	X	X	X	X
Dominican Republic	X	X	✓	X	✓	X	✓	X	X	X	X	X
Grenada	X	X	✓	✓	X	X	✓	X	X	✓	X	X
Haiti	✓	X	✓	✓	X	X	✓	X	X		X	X
Jamaica	✓	✓	✓	✓	✓	✓	✓	✓	X	✓	✓	X
Montserrat	✓	X	✓	X	X	X	✓	X	X	X	X	X
Netherland Antilles	X	X	✓	✓	✓	X	✓	X	X	X	X	X
St Lucia	✓	✓	✓	✓	✓	✓	✓	X	✓	✓	X	X
St Kitts & Nevis	✓	✓	✓	X	✓	✓	✓	✓	X	✓	X	✓
Trinidad & Tobago	✓	✓	✓	X	X	✓	✓	✓	X	X	X	X

KEY	✓	Country has feature
	X	Country does not have feature

Figure 4 - Features of Caribbean e-Government Gateway or Portal Websites

Source: The World Wide Web enhancing e-government in the Caribbean¹²

Figure 4 highlights the results of studies of Internet applications used in e-Government, and also assesses more closely a number of Caribbean web sites which facilitate e-Government services. In the research, Professor Fay Durrant¹² of the University of West Indies examined the scope of Caribbean web development initiatives. The major features of e-government in the Caribbean included comprehensive portals, gateways, privacy and security policies and protection, clearly stated onsite identification of

organizations, access to online databases and publications, links to government and non-government web sites, audio and video clips, service delivery, and promotion of services and products. Even though there are several features lacking on Caribbean portals, it is evident that Caribbean governments have adopted e-Government as a means of providing all citizens with an efficient and alternative medium for accessing public services and for interacting with public sector providers.

Activity – Knowledge Society Index

Participants are asked to rank the countries of the Caribbean along a Knowledge Society Index (KSI). Participants should utilise research to define their own ranking criteria, which must be justified. Finally, participants will be asked to defend and justify their ranked KSI table.

DEMOCRATISATION AND TECHNOLOGY CHANGE

Within each knowledge society, the capacity for technology change is limited by factors such as the need for multiple-service delivery systems, bureaucratic fragmentation, budget resources, group conflict, media coverage and partisan cleavages. Until these constraints are overcome, it will be difficult for government, businesses and civil society to realize the full potential of the Internet in service delivery and interactive democracy.

Two-Systems Problem – Electronic vs. Traditional

In the government, the Internet has been sold as a revolutionary tool that cuts costs and improves the effectiveness of public sector performance. In reality, the upfront investment costs of new technology are substantial and cost savings do not emerge until enough users start taking advantage of electronic delivery systems that governments can save money through traditional “bricks-and-mortar” delivery systems.

When government agencies have to maintain multiple delivery systems, service delivery cost more. For example, the infrastructure that provides online tax filing or electronic filing of citizen complaints exists on top of traditional government offices operating through face-to-face contact, phone calls and mail.

In addition to increasing costs, multiple channels create considerable potential for organizational conflict. People who work in the digital domain come from different educational backgrounds, organizational cultures and salary situations than traditional staff responsible for processing phone and paper demands. This clash of old- and new-economy perspectives complicates technology integration and slows the rate of innovation within the sectors of the knowledge society.

Bureaucratic Fragmentation

Another major issue in the application of new technology in the knowledge society is its adoption and diffusion among government agencies. As with many types of organisation, public agencies are sometimes reluctant to change course and alter their ways of doing things. Officials must make concrete choices to share knowledge and infrastructure across agencies and organisations, adopt technology and use technology to further the organisations goals.

According to Tornatzky and Klein¹⁵, three qualities associated with public sector technological innovation are the ease of usage, compatibility with agency mission, and the existence of a relative advantage in the use of the technology. Inventions that maximize these features are the ones likely to be adopted by a government agency.

Jae Moon¹⁷ writes that there is a relationship between organizational size and type of government and the adoption of e-Government. In his study of municipal governments across the country, he found that larger cities and those with professional management in the form of city managers were most likely to have a website. For example, 90 percent of council-manager governments had a website, compared to 77 percent of mayor-council governments. This research suggests that organizational qualities are important to technological innovation and that more professional bureaucracies are the ones most likely to innovate.

Budgetary Resources

A third factor that is crucial for the growth and accessibility of the knowledge society is the cost of information technology. New technology is very expensive, especially in terms of up-front costs. Of course, development expenses for websites and applications are eventually recouped over time as costs get amortized and spread over more users.

In looking at electronic governance, there are several models used to finance innovation in the e-Government area: general tax revenues, user fees and commercial advertising (or some combination of the various revenue sources).

Electronic governance is promoted and seen as a collective benefit to the country, so it makes sense that its basic cost is paid for by taxpayers in general. When economic times are good and governments have abundant resources, tax revenues are a popular way to pay for e-Government. However, when times turn tough, spending on e-Government must compete with expenditures for education, health care and welfare.

In the user fees model, those individuals accessing online information and services pay for the costs of providing those materials. This model accounts for the fact that it can be unfair for all taxpayers to subsidize a service that is utilised by a relatively small group of citizens that is typically well educated and well off. The whole idea behind user fees is to link investment to those who are deriving benefits from the specific services being used.

Commercial advertising extends the approach common with media outlets to the Internet. It suggests that e-Government financing can be paid through the placement of product ads on government websites.

With government tax revenues weakening, some cities have turned to what is called a “self-funding” model partnership with the private sector. In this arrangement, governments and organisations outsource portal development to a corporation in return for the company deriving income from user fees.

Group Conflict and Outsourcing

A factor that constrains the degree of possible technology change is conflict between groups outside government. Due to their expertise, financial clout, or political connections, some private groups are in a stronger position to compete for public benefits than others. This variation in competitiveness affects the extent to which technology gets incorporated in the agency’s mission.

Group conflict is particularly relevant for technological change because much of the innovation that takes place in any society comes from outside the public sector. Either private companies (sometimes with state support) or universities and non-profit

organisations are leading engines for creating new ideas. They are part of the knowledge society explicitly designed for knowledge creation and technology transfer to other organisations. Recognising this fact, much of the public sector takes advantage of research assistance from outside of government in order to boost productivity and deliver services more effectively.

A more common model is for private or non-profit groups outside the public sector to lobby for change and provide expertise that helps bureaucrats adopt new technology in particular agencies.

Each of the development models (in-house, outsourcing and public/private partnerships) varies considerably in the areas of reliance on outside groups and the degree of conflict with outside sources. In-house models generally involve the least group conflict because government officials are developing systems using existing personnel. Outsourcing engenders more conflict because groups compete for the right to build government websites. Public/private partnerships involve some degree of conflict but this is mediated by the fact that many of the alliances come with non-profit rather than for-profit organisations. The non-profit nature of this group competition reduces the most vociferous type of conflict and thereby facilitates the speedy adoption of technology by the public sector.

Leadership, Partisan Conflict, and Media Coverage

The last set of factors that affects the adoption of new technology is the degree of leadership, partisan conflict, and media coverage. Political leadership and professional staff are vital for bureaucratic inertia to be overcome. Leaders use the media to highlight top priorities and marshal financial resources that are necessary for the implementation of technical improvements.

Indeed, the professionalism of the state has been found to be related to the adoption of e-Government services. A study by Ramona McNeal et al. found that “innovation in e-

Government is driven by legislative professionalism and to a lesser extent, state professional networks.”

While it hard to measure an intangible factor such as leadership, case studies demonstrate the importance of individual initiative for the marshalling of financial resources and getting organisations to work together. Technology obviously is not a high priority for all organizational leaders and government officials. Some see it as an expensive and untested investment that could yield few dividends. Others see alternative issues as more important.

As the public comes to believe that e-Government is subject to the same political forces as traditional government, however, there is the danger that citizens will grow cynical about electronic democracy and no longer well view it as a technocratic mechanism for the improvement of government service delivery. Contracting scandals and charges of favouritism in vendor awards attract critical scrutiny from journalists and lead to stories that undermine the technocratic image of government reform. In the long run, this weakens support for e Government and makes it more difficult to attract financial resources to this area.

Activity – Opinion-based Exchange

Participants are asked to (a) identify the most significant constraint on technology change in the English-Speaking Caribbean, and (b) formulate a solution to overcome the constraint within the Caribbean context.

CONCLUSION

Knowledge societies enable people, in groups and as individuals, to identify, produce, process, transform, disseminate and use information to build and apply knowledge for human development. These abilities generally support the tenets of democracy by providing better representation, and extending the basic freedoms for citizens. In societies where information is assuming strategic importance, the growth of freedom of expression is being used to further the spread of norms and professional ethics, thereby helping to ensure the quality of the information available.

The universal access to knowledge resources is full of promise, but it can also cause irreparable damage and create unpredictable dangers. The growth of knowledge societies might precisely be one of the most effective means to address this new complexity.

There are many knowledge-related asymmetries on a global scale, whose accumulation has created the knowledge divide. Without the promotion of a new ethics of knowledge based on sharing and cooperation, the most advanced countries tend to benefit and deprive the poorest nations of assets such as new medical and agronomical knowledge, and to creating an environment that impedes the growth of knowledge.

It is therefore necessary to find a balance between protecting intellectual property and promoting the public domain of knowledge: the democratic principles of freedom of expression, cultural diversity, and universal access to knowledge must remain the pillars that support the global transition towards knowledge-based societies.

FORUM DISCUSSION QUESTIONS

The following topics are presented in the forum to inspire reflective thought & discussion:

1. To what extent might ICTs facilitate more accountable government?
2. To what extent might ICTs be used to create a more informed citizenry?
3. To what extent might ICTs enable citizen participation in decision making concerning affairs of state and civil society?
4. Can electronic democracy assist in overcoming the present social challenges?
5. How can the Web-enabled knowledge society foster stronger democracy?

BIBLIOGRAPHY

The following references detail the specifics of the subject.

1. See Robin Mansell and Ulrich Wehn, *Knowledge Societies: Information Technology for Sustainable Development*, New York, United Nations Commission on Science and Technology for Development, Oxford University Press, 1998 is available at <http://books.google.com/books?id=zAwMVDmeQUcC&lpg=PA1&ots=6SAndz13hV&dq=Information%20Technology%20for%20Sustainable%20Development&lr=&pg=PA11#v=onepage&q=&f=true>
2. Brewster Kahle is Director and Cofounder, Digital Librarian, and Chairman of the Board, Internet Archive. His presentation “Toward Universal Access to All Knowledge” was recorded for podcast and is available at <http://www.educause.edu/blog/gbayne/PodcastTowardUniversalAccessTo/170701>
3. CNN. (2007-07-24). “Questions, not answers, highlight YouTube debate” available at <http://www.cnn.com/2007/POLITICS/07/23/debate.main/>
4. Hitwise, “Top Presidential Candidate 2008 Websites” available at <http://www.hitwise.com/political-data-center/key-candidates.php>
5. Eldon, Eric. (2008-12-18). “2008 Growth Puts Facebook In Better Position to Make Money”. VentureBeat available at <http://venturebeat.com/2008/12/18/2008-growth-puts-facebook-in-better-position-to-make-money/>

6. YNET News, (2006-02-24). Israel Video Blog aims to show the world 'the beautiful face of real Israel' available at <http://www.ynetnews.com/articles/0,7340,L-3220593,00.html>
7. See the Encyclopaedia Britannica available at <http://www.britannica.com/EBchecked/topic/1192819/wiki>
8. Libby, Dan (1999-07-10). "RSS 0.91". Netscape Communications is available at <http://web.archive.org/web/20001204093600/my.netscape.com/publish/formats/rss-spec-0.91.html>
9. See Doodson, J. (2009). The relationship and differences between physical and virtual world-personality. Conference paper presented at University of Exeter available at <http://people.bath.ac.uk/jd254/JamesDoodson-UOB-UGradDiss.pdf>
10. Linden Lab (2009), The Open University in Second Life: An Education Case Study at http://secondlifegrid.net.s3.amazonaws.com/docs/Second_Life_Case_OpenU_EN.pdf
11. See the 2001 U.S. Census Bureau Current Population Survey available at <http://www.ntia.doc.gov/ntiahome/dn/html/chapter3.htm>
12. See the Survey at <http://www.census.gov/compendia/statab/tables/09s1122.xls>
13. See "The World Wide Web enhancing e-government in the Caribbean" by Prof. Fay Durant, UWI, 2005 at http://archive.ifla.org/IV/ifla71/papers/167-e_Durrant.pdf

14. See the USA.gov About Us page available at <http://www.usa.gov/About.shtml>
15. Spencer Hsu, "New Site Streamlines Online Government," Washington Post, September 23, 2000 at <http://www.highbeam.com/doc/1P2-547852.html>
16. Louis Tornatzky and K. Klein, "Innovation Characteristics and Innovation Adoption-Implementation: A Meta-Analysis of Findings," IEEE Transactions on Engineering Management, Volume 29, number 1, 1982, pp.28-45 and is available at http://www-management.wharton.upenn.edu/klein/documents/Tornatzky_Klein_1982.pdf
17. Jae Moon, "The Evolution of E-government among Municipalities: Rhetoric or Reality?" Public Administration Review, Volume 62, number 4, 2000, pp. 424-433 at <http://andromeda.rutgers.edu/~ncpp/cdgp/articles/moon-2002.pdf>

SUGGESTED READINGS

The following readings are recommended to support achievement of the module objectives.

- World Summit on the Information Society Outcomes Document. 2005. The document is available at <http://www.itu.int/wsis/outcome/booklet.pdf>
- Hague, Barry N. & Loader, Brian D. 2005. "Digital Democracy: Discourse and Decision Making in the Information Age". Taylor & Francis e-Library.
- Paul, David A. & Foray, Dominique. 2002. "An Introduction to the Economy of the Knowledge Society" International Social Science Journal, Number 171.
- UNESCO World Report. 2005. "Towards Knowledge Societies" available at <http://unesdoc.unesco.org/images/0014/001418/141843e.pdf>
- West, Darrell M. 2005. "Digital Government: Technology and Public Sector Performance" Princeton University Press.