

ELECTRONIC GOVERNMENT IN MALAYSIA: EVALUATING FEDERAL GOVERNMENT WEBSITE

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ABSTRACT

A content analysis study was conducted to determine the status of government websites of Malaysia, focusing on federal websites – using presence, content, service delivery and public response attributes. The results were matched with the General Circular No. 1/2000, Guidelines on Malaysia Civil Service Link (MCSL) and Government Web Sites that was introduced in 2000 by MAMPU. The study identified 28 federal government web sites that linked to MyGovernment Portal. The website content revealed that the basic features were added, except for more interactive features such as email and multimedia. Public outreach need to be improved because only 50% web sites offer dual languages and almost half of the site do not disclosed the last updated date. None of the web sites provide the chat room facility, which allows the government and citizens to interact online, and make government closer to the citizens. E-government officials need to work to improve citizen respond because 73.6% of the government agency site does not respond to citizens email request. One of the practical implications of this study is the attributes can serve as indicators for individual governments to strive towards better web service delivery.

KEYWORDS

Government Website, E-Government, Online Service.

1. INTRODUCTION

The Government of Malaysia has launched the Electronic Government (E-Government) initiative in 1997 to reinvent itself to lead the country in Information Age. In the Information Age, government will need to become leaner and more responsive to the demands of its constituents while improving the accessibility and quality of government services. The E-Government initiative applies to all the services government provides to citizens and businesses. E-Government seeks to improve the access to and quality of all services, including transaction-based services, including payment or without payments, and information-based services, that are private to citizens and general to public (MDC, 1998). Citizens are at the core of the process in E-Government, thus a user-centered government web site is the significantly related to the success of government online service.

In line with this, Malaysian Government through its leading agency for E-Government, Malaysian Administrative Modernization and Management Planning Unit (MAMPU) has come out with General Circular No 1/2000 in May 2000, namely Guidelines on Malaysia Civil Service Link (MCSL) and Government Web Sites. It prepares guidelines on development and maintenance of government agencies web sites. All government agencies nationwide were expected to have a web presence by the end of 2000 and must link to MCSL, Malaysia official gateway portal (replaced to myGovernment Public Service Portal in 2005).

Little research has been carried out to look at E-Government initiatives in Malaysia and to assess its effectiveness by means of tracking the extent of its web based service delivery. This research paper would review the current condition of E-government in Federal Government by looking at their websites content, assessing the service delivery and evaluate their respond to citizens' email inquiry. Therefore, the findings of this research can identify whether the Federal Government are showing the high commitment to adopt and deliver of information and services over the Internet.

Nowadays, all level of government in Malaysia are transforming and extending their services into online applications. However, as reported by Raslan Sharif (The Star Online, 2004), a new global study on E-

Government sees Malaysia is plunging from No 8 to No 83 in ranking. Malaysia's current middling ranking currently is notable as E-Government is a key Multimedia Super Corridor (MSC) Flagship Application. Most of the components under E-Government Flagship Application are aimed at improving internal administrative efficiency and productivity, rather than online information and service delivery to the public.

Almost two years ago, when he was still Deputy Prime Minister, Datuk Seri Abdullah Ahmad Badawi issued a directive to all government departments and agencies to update their web sites. Government departments and agencies that have not looked after their web sites properly must turn their immediate attention to taking corrective measures. This means not only focusing on updating information but also to an overhaul of other areas of inadequacy such as bad navigation, poor design, and slow responses to e-mail enquiries (New Straits Times, 05).

As users of the internet become more adept at navigating through the web, they are beginning to refine their critical evaluation skills of the web sites that they browse. Once a user had determined that a site had met the criteria for quality content, they should logically progress to evaluate the structure of the web sites. If the Internet-literate publics have great difficulty in getting access to vital information and services, they may well be discouraged from using the web-based channels of E-Government.

This study, therefore, attempts to examine the status of implementing E-Government services in Malaysia through content analysis of federal government websites. Since creation of user-centered government website is the significantly related to the success of government online service, it is possible to determine latter by analyzing the status of the former. In determining the status, the study uses website presence, content, service delivery and public response attributes.

2. MOTIVATION OF STUDY

There are two reasons that motivated us to perform this study. First, based on previous study done by other researchers on government web sites focus on lower level government agencies only, such as Local Authorities (Radiah, 2001 and Kalsom, 2004) and State Statutory Bodies (Halimah, 2004). The result shows that there were only 60.8% State Statutory Bodies web sites has linked to the MCSL. However study by Radiah in 2001 found that only 33% local authorities have web sites, and it increased to 37% in 2004, according to study by Kalsom. These are contradict with the General Circular requirements, where it requires all government agencies need to establish and maintain their own web sites and the web sites need to be linked to MCSL by the end of 2000.

Second motivating factor is the year of the establishment of the Circular. 5 years after the introduction of the Circular, we assume that the higher level of government machinery which is federal government should be better in term of web sites presence, web sites presentation and compliance with the General Circular. Thus this paper aims to fill the research gaps, and hope it will contribute to the government agencies where they can refine their web sites content and presentation.

3. RESEARCH OBJECTIVES

The research has the following objectives:

1. To determine the presence of federal government web sites.
2. To examine the content of federal government web sites.
3. To investigate government responsiveness to citizens request.

4. SIGNIFICANCE OF STUDY

The study could provide input feedback on the level of readiness and effectiveness of E-Government initiatives among Federal Government. It can give insight to the government, especially the leading agency, MAMPU on federal government's commitment and readiness to provide online services to the public. Most notable practical implications of this study are the attributes can serve as indicators for individual governments to strive towards better web service delivery.

5. LITERATURE REVIEW

5.1 E-Government

E-Government refers to the delivery of information and services online through the Internet or other digital means (West, 2000). Luling (2001) simple defines E-Government as online government services, that is, any interaction one might have with any government body or agency using the Internet or World Wide Web. With more broad aspects, Holmes (2001) defines E-Government as the use of Information Technology, in particular the Internet to deliver public services in a much convenient, customer oriented, cost-effective and altogether different and better way.

5.2 E-Government in Malaysia

Malaysia's huge E-Government initiative began in 1997 with the launch of the Multimedia Super Corridor (MSC) E-Government Flagship Application. The E-Government initiative was launched to lead the country into the Information Age. It will improve both how the government operates internally as well as how it delivers services to the people of Malaysia. It seeks to improve the convenience, accessibility and quality of interactions with citizens and businesses; simultaneously, it will improve information flows and processes within government to improve the speed and quality of policy development, coordination and enforcement.

Web sites are now a major vehicle through which government agencies deliver information to the public. The growth in the number of government agency web sites is striking. The government agencies began actively posting information on the Web in 2000 after the introduction of the Circular No 1/2000. The myGovernment Public Service Portal is a single gateway to information and services provided by Malaysian government agencies on the internet.

The myGovernment Portal initiative was undertaken by Malaysian Administrative Modernization and Management Planning Unit (MAMPU). MAMPU is a central agency under the Prime Minister Department entrusted with the task of introducing administrative reforms in the public sector to upgrade the quality, efficiency, effectiveness and integrity of Malaysian public service in accordance with national goals. Currently there are hundreds of government agency web sites listed in myGovernment Portal. Yet, despite the rush by so many agencies to establish a Web presence, no study has yet exists to evaluate the compliance with the guidelines in General Circular 1/2000 for federal government web sites.

5.3 Benefits Associated With Government Online Services to the Public

Study on Internet technologies carried out by McIvor, McHugh and Cadden (2002) concluded that public sector organizations that have adopted Internet technologies will be more responsive to the needs of the citizen and have the opportunity to enhance the way in which they fulfill the need of the users of their products and services as Internet facilities would enable users to access information and services whenever and wherever they chose. Furthermore, in the future, the expectations of public will continue to rise with the increasing of online trading which allows business to be conducted at any time of the day. Public sector agencies that do not adopt the technologies will continue to have major problem achieving efficiencies and delivering the value expected by the public.

The Internet and World Wide Web offer two main capabilities further local governance reform (Ambramson, Arterton and Orren, 1998; Bimber, 1996; Raab, Bellamy, Taylor, Dutton and Peltu, 1996). First, distributing and receiving up-to-date information concerning municipals affairs is cheaper and convenient, easy to access, constant availability and the ability to present information in a visually pleasing and understandable format. Second, through the email and chat rooms, the Internet facilitates communication across distance, time, and different social groups and institutions.

Norris, Fletcher and Holden (2001) found that local governments in the United States are actively adopting elements of E-Government but only few are providing interactive services online and this may be because E-Government is new relatively new, staff deficiencies, lack of resources or technology expertise and concerns over privacy and security. The public sector agencies in United States are becoming cyber active but the information convey through web sites differ among public agencies, according to study by Stowers and Genie (1999).

As federal agencies move to the Web environment as a primary means to disseminate information to the public, they require performance measures concerning the extent to which their web sites are successfully

presenting and conveying the government information the public needs to access and use (Sprehe, 1998). However, Johnson (1996) mentioned that web sites are built with little consideration of basic presentation standards and how such may affect the ability of the users to locate, trust, and use public information provided online. Furthermore, it is important for agencies to provide information in a manner that best serves the interests of their users.

5.4 Past Research on Evaluation of Government Web Sites

Researches by Eschenfelder et al (1997), Demchak et al (2000), and West (2000), represent evaluation of E-Government web sites. These works typically focused on characteristics of web site descriptively. For example, the work of Eschenfelder (1997) is an early attempt that explored web site evaluation for the federal government. However, the criteria used to evaluate the web sites emphasized an organizational perspective of the government agency. The work done by Demchak et al (2000) is designed for evaluating the organizational openness of a government web site solely from characteristics of the Web site itself. Lastly, the evaluation approach used by West (2000) was developed only on the basis of characteristics found by observing web sites (e.g. phone contact information, addresses, publications, databases, foreign language, access, privacy policies, security policies, an index, disability access, services, email contact information, and search capabilities, etc.).

Study by Halimah et al (2004) evaluated on web sites presence and content disclosed by State Statutory Bodies. The study disclosed that only 60.8% of Statutory Bodies have web sites that are linked to MCSL, which is encouraging compared to study by Radiah et al. (2001), due to the timeframe. Kalsom (2004) studied on the availability of electronic service delivery by Local Authorities, where the findings concluded that Malaysia's Local Authorities have already made headways through web sites and electronic service delivery to drive towards E-Government concept and citizen-centric initiatives.

December (1994) in his article mentioned that the challenge for a Web information provider is to acknowledge the dynamic nature of Web information and recognize that information quality is not just a set of outward characteristics or design decisions, but a part of continuous process in which content and presentation are adjusted to meet users needs. Even though presentation of a site doesn't necessarily indicate the validity of its information, it does affect an evaluation of the site. The presentation of information on a site is important not only because it makes the first impression on the user, but also because it affects how easily the information can be accessed and documented.

6. METHODOLOGY

6.1 Data Collection

The data for our analysis consisted of 28 federal government web sites in Malaysia. The list of ministries assessed was obtained from the myGovernment Public Service Portal (<http://mawar.www.gov.my/MYGOV/BM/Directory/Citizen/Home.htm>). The analysis was undertaken from 1 July 2005 to 21 November 2005

This research is a descriptive study with the aims to identify the web presence of federal government, and most importantly the link with myGovernment Public Service Portal, as the one-stop source for government information and services.

Secondly, in our analysis of web sites content, web sites were evaluated for the presence of 18 various features dealing with information availability, service delivery and public access. Features assessed included an address, telephone number, fax number, email address, disclaimer, updating, dual language, online publications, online database, external link to main agency and branches web site, multimedia, online form, online payment, information searching, email directory, comment form and chat-room.

For E-Government service delivery, we looked at the number and type of online services offered. If a citizen had to print out a form and then mail it back to the ministry, we did not count that as a service which could be executed online. Searchable database counted as service only if they involved accessing information that resulted in a specific government service response.

In order to examine responsiveness to citizen requests, we sent an email to the webmaster or public relation officer to all ministries. The message was short, asking a simple question such as, "Could you let me

know what your official opening hour is? Thank you”. Email responses were recorded based on the time it took for the ministry to respond.

6.2 Evaluation Elements

Based on the guideline, availability of the attributes will be measured using dichotomous (yes or no) measures for the compliance with the guideline. 0 score will be given if the attribute is not available and 1 score if the attribute is available and comply with the guideline.

To ensure the reliability of the data, each federal web site was visited by two different evaluators. The result was compared. In case significant variation exists between evaluators, web sites were analyzed for the third time. Furthermore, evaluators were given list of guideline for assessing web sites.

7. FINDINGS AND DISCUSSION

7.1 Web Sites Presence

During the review period from July 2005 to November 2005, findings of this study show that 100% of the federal government in Malaysia have web sites presence and can be assessed from myGovernment Portal. However, there still remain 10 out of 28 ministries or 35.8% that the web sites do not have a link to myGovernment Portal, and 1 ministry that still linked to the old Portal, MCSL. The result shows that the use of Internet to deliver government information and services has become a growth industry in Malaysia.

Table 1: Web Site Presence

Features	Available	Percentage
Accessible Web site	28	100
Link from myGovernment Portal	28	100
Link to myGovernment Portal	18	64.3
Link to MCSL	1	3.5

7.2 Web Sites Content

Content is a critical component of any web site. No matter how technologically advanced a web site’s features, if its content is not current, if it is difficult to navigate, or if the information is not correct, then it is not fulfilling its purpose. When examining web site content, our research examined three key areas: online information, online services and public outreach.

7.2.1 Online Information

The various information features that government web sites have online was the first area we examined. Here we wanted to see how much material available that would help citizens contact government agencies and navigate web sites. The vast majority of site provides their telephone number (92.9%), fax number (78.6%), address (96.4%) and email (53.6%). These are materials that would help citizens needing to contact a government agency. A large portion of site, 89.3% also provide external link to web sites of agency under the ministry and branches. These links allows visitors to access further information for specific government agency that was not provided on the site.

In term of the content of online material, many ministries have made extensive progress at placing information online for public access such as paper release, news, announcement, activity calendar and latest update (92.6%) and 64.3% provided some kind of database and disclaimer. It is advisable to place a disclaimer at the bottom of emails and web sites informing users that the organization has taken every possible step to prevent the spread of computer viruses, but accepts no liability should a virus occur.

However, fewer sites incorporate multimedia features (audio clips and video clips) on their official sites. Despite the fact that these are becoming much more common features of e-commerce and private sector enterprise, only 46.4% of government web sites provided multimedia. Clearly, most government sites have not yet realized these innovation means of providing information to site visitors.

Table 2: Online Information

Features	Frequency	Percentage	Ranking
Address	27	96.4	1
Publications	26	92.6	2
Telephone Number	26	92.6	2
Link to Branches	25	89.3	3
Fax Number	22	78.6	4
Databases	18	64.3	5
Disclaimer	18	64.3	5
Email (Inquiry)	15	53.6	6
Multimedia	13	46.4	7

7.2.2 Online Services

For E-Government service delivery, we look at the number and the type of online services offered. Of the web sites examined, we found two kinds of online services, online form submission and online payment transaction. Although from the findings we found that 21 or 75% agencies providing some kind of online form, but only 32% can submit the form online.

It is common practice for private enterprises to offer online payment transaction with the use of credit cards. However, of the government web site analyzed only 3.5% government web site providing online payment transaction. This low number can be interpreted in two ways. First, governments are providing many services free of charge, thus have no need to accept any payment or secondly, the government is lagging behind in terms of technology innovation.

Here, we can conclude that most government agency does not realize the benefits of online service delivery both to the government and its constituents. In the long run, online services have a potential to lower the costs of service delivery and make service more widely accessible to the public. The citizen does not have to visit, write, or call an agency in order to execute specific service, thus saving their time and money.

Table 3: Online Services

Features	Frequency	Percentage
Online Form	21	75
Online Form & Submission	9	32
Online Payment	1	3.6

7.2.3 Public Outreach

National Information Technology Council (NITC) meeting was held on 29 March 2005 and chaired by Malaysia Prime Minister. In this meeting, YAB Dato' Seri Abdullah Ahmad Badawi asked all government agencies to update their web sites frequently and to make web site as not as information provider, but also can be a median of interaction with the public. Thus, the web sites must be able to have a two ways communication. The following features are analyzed to examine the interactivity of government web sites to serves as a public outreach-facilitating communication between citizens and government.

Table 4: Public Outreach

Features	Frequency	Percentage	Ranking
Email (Directory)	21	75	1
Comment	20	71.4	2
Extranet	19	67.9	3
Searching Tool	17	60.7	4
Chat room	0	0	5

The first feature analyzed is email capability. In this instance, we determined whether a visitor to the web site could email a person in particular department other than the Webmaster. If the person can only view the information on the web site without ability to respond or contact department for the specific issues, the potential for two way interaction is dissatisfied. This technology is available from the majority of the web sites, this is 75%.

There are other methods that government web sites can employ to facilitate public feedback, rather than the email. These include post comments, which appeared on 71.4% of the sites. Web site using these features allows citizens and department members alike to read and respond to others' comments regarding

issue facing the agency. None of the site has real-time chat room, which can provide immediate response and more like actual conversation.

Enabling conversation between citizens and government is not only the way to bring citizens closer to the government. Making government easily accessible is another thing that we examined. The feature that makes this possible is search function, where it has an ability to search for particular information on the web site that the visitor desired. About 60.7% of the sites offer the search function.

Government web sites are encouraged to update their web site more frequently so that the visitors can retrieve updated information. Prime Minister, YAB Datuk Seri Abdullah Ahmad Badawi issued a directive to all government departments and agencies to update their web sites (New Straits Times, April, 04 2005). To examine this, we looked at the last updated date and range it weekly from the date we accessed the site.

Table 5: Web site Update

		Frequency	Percentage
Duration of web site update	One week	8	50
	Two weeks	4	25
	Three weeks	2	12.5
	Four weeks or more	2	12.5
	Total	16	100
	Not available	12	
Total		28	

Nearly half of the site do not disclosed the last updated date, representing 42.9% out of 28 web sites examined. Of the web site that disclosed the information, about 50% updated the web site within a week, 25% in 2 weeks, and 12.5% in three weeks. Surprisingly, there are still government agencies that only updated their web site for more than a month. These are contradicting with what we expect from the government, whereas they should provide up to date information to the citizens they served.

Providing dual language is essential because the government is not only serving citizens in Malaysia, but also marketing themselves worldwide in a borderless internet environment. The web site should gear towards promoting this country to foreign investors and tourists. Thus, providing English Version site is being emphasized by the Circular because it will benefit the government agency, especially in the era of globalization. However, in our analysis, only 14 government sites (50% overall) offered an English version site. 42.9% provide a Malay version site only, and there are 2 sites that provide information in a mixture of Malay and English language.

Table 6: Dual Language

Features	Frequency	Percentage
Malay Version only	12	42.9
Both Malay and English Version	12	42.9
English Version only	2	7.1
Mixture	2	7.1
Total	28	100

The result is contradicted with what was quoted by Chief Secretary to Government Tan Sri Samsuddin Osman "ICT (information communications technology) is the enabler in enhancing our delivery system and this will help attract foreign investors" (The Star, December, 14 2005).

7.3 Public Responsiveness

"This means not only focusing on updating information but also to an overhaul of other areas of inadequacy such as bad navigation, poor design, and slow responses to e-mail enquiries" (YAB Dato'Seri Abdulllah Ahmad Badawi, New Straits Times, April, 04 2005). While it is important to have email address available on government web sites, they serve no purpose unless someone actually reads and responds to citizens' request. To test government responsiveness towards citizens, we sent email message asking for information regarding the official opening hours. We then calculated their response to our messages by a number of days.

The research found that 9 out of 28 government web sites do not provide an email address for the citizens to forward any enquiry. Thus, only 19 government agencies were tested for responding to citizen's enquiry. As the following table demonstrates, government officials were not responsive to emails. Only 26.4% responded by answering our query. Of the answered email, 15.8% responded in one day, 5.3% in two

days and another 5.3% took more than three days. In general we found those government officials were not responsive to citizens' questions and concerns.

Table 7: Public Responsiveness

		Frequency	Percentage
Time taken to response	One day	3	15.8
To citizen's email enquiry	Two days	1	5.3
	Three days or more	1	5.3
	Not reply	14	73.6
	Total	19	100
	No Email for Enquiry	9	
	Total	28	

There are few reasons that might lead to this result. First, the question asked might be too simple. The webmaster might have other important citizens' enquiries to entertain. Secondly, the sender email address (yurita@uum.edu.my and aryati@uum.edu.my) representing government agency, so that the webmaster might simply conclude that the sender should know government operating hours. Thirdly, the government agencies probably outsource the web sites maintenance to the third party, so they do not bother to answer the enquiry. Lastly, this result could also relate to not updating the web sites frequently, thus the webmaster does not read recent email enquiry.

In the future, to get a better result on government responsiveness, we recommend a more specific question should be asked to the government agencies and direct to the specific person. Also, we can test to send the email from other email address instead of using official government email address. Here we believe the result will be more accurate to generalize whether the government agencies are responsive or not.

8. CONCLUSIONS AND RECOMMENDATIONS

To summarize, we find that some helpful material has been placed online, but that much work needs to be undertaken by federal government to upgrade their web sites. The government officials need to incorporate advanced technology into web sites in order to take a full advantage of the potential benefits of the Internet. Apart from online information, few federal government web sites offer online services.

The survey shows that there are problems of public outreach that need to be addressed. Few sites offer access in dual languages. Government should realize that web site should gear towards promoting this country to foreign investors and tourists. In addition, other than email contact information, many ministries have been slow to embrace the interactive feature, such as chat room, that facilitates communication between citizens and government agencies. Simple tool such as web site search engine are important because such technologies give citizens the power to find the information they want on a particular site.

Furthermore, there needs to be more frequent updates of the government site. Some web sites appeared as if they had not been updated for months. Citizens would be encouraged to make greater use of E-Government resources if the ministries both update and place more material online.

Beyond these results, we found that government responsiveness to citizens' request is the major problem need to be highlighted. The email address provided on the site serves no purpose if no one read or responds to citizens' requests. Of this, 32.1% of the sites still lack email capabilities. This failure of the government to include fundamental form of direct contact in their web sites marks as corresponding failure to reach out to an audience that may be unwilling or incapable of contacting that particular federal governments directly by phone, by printed email, or in person. Such a basis feature should certainly be included on any helpful government web site.

Features such as site map that organize a site and tell a citizen how to navigate the site were not emphasized. Only 10 government sites provide a site map. A map of the information contained within a site can make navigation through the site easier for the visitors, especially if it follows a logical pattern. If the Internet literate public have great difficulty in getting access to vital information and service, they may well be discouraged from using the web-based channels of E-Government. Other feature that should be included is Frequently Asked Question (FAQs), a list of frequently asked questions and their answers about a given subject.

E-Government revolution will continue to evolve as technology grows. New services and features will be placed online. Thus it is recommended that government agencies could think of enhancing communication by utilizing applicable advanced technology and Internet features. Federal government should

improve web site organization and structure, more contact information and methods, and make government more responsive and accessible to the public. Without such vital information, it is impossible to bring government closer to citizens.

In conclusion, it is hope that this research critiques web sites of the federal government, provides benchmarks for measuring future improvement, and provides other government agencies with advice for improving their web sites based on the best practices found in this study.

9. LIMITATION AND FUTURE RESEARCH

The most notable problem in doing this research is accessing the government web sites. During the period of data collection (July 2005 – November 2005), a number of times the myGovernment Portal cannot be accessed due to networking error. Sometimes multiple attempts needed to retrieve the federal government web sites.

Furthermore, it should be noted that the data collected remain correct on the date the information was accessed only. There might be some changes when this report is released due to changes of information disclosed on the web sites.

Finally, to gain a better picture of government web sites, it is more significant if the whole government agencies, federal, state and local government web sites are analyzed. This will be part of our future enhancement of this research. Comparative analysis could also be done to see which government level is seriously implementing the E-Government initiative.

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