Preferred Communication Medium For E-Government: 
A Case Study of Yogyakarta Province, Indonesia

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One of the main problems in the implementation of e-government in developing countries is the low rate of citizen participation. The low participation rate has a direct correlation with the low Internet penetration, so it could be presumed that the Internet is not popular with or familiar to citizens in developing countries. This study investigates what actually is the preferred medium.

As a case study for developing countries, research to find the preferred medium has been conducted in five regencies of Yogyakarta province-Indonesia. It was found that personal contact was the preferred way for people in Yogyakarta province when they want to communicate with the local authorities or to transact with public agencies. On the other side, letter is the least preferred medium. Telephone is the highest preference means for communicating and transacting if they can not come to the public offices or make personal contact with the public officer. Therefore, it proposes that government should not leave telephone as the channel of e-government services and manage seriously about the call center services. Instead of the Internet-based e-government, the Short Message Services (SMS) is a good alternative medium for delivering e-government services. In addition, it covered a fact that time is the most important factor when choosing the e-government medium for people in Yogyakarta province (41%). Finally, this paper also proposes that the first benefit promoted by the e-government systems in Yogyakarta province is the time efficiency.

1. Introduction

One of the main problems in the implementation of e-government in developing countries is the low rate of citizen participation. Citizen participation is important to the success of an e-government system as services provided by online channels are only as useful as the extent to which citizens actually use the services. Research by Accenture (1) found that the use of e-government in developing countries is very low: 11% on average; compared to e-government usage in developed countries such as Europe Union countries, Australia and United States where the use is between 70%-90%.

The low level of e-government usage in developing countries is connected to the low Internet penetration, as Accenture (1) identified that there is a direct correlation between the Internet penetration and the incidence of e-government usage: the higher the Internet penetration, the higher the incidence of e-government usage. Based on survey data by Internet World Stats, Susanto (2) analyzed that the Internet penetration in developing countries is very low, 4.07% of the population on average. By comparison, Internet penetration in developed countries, such as the 25 members of the European Union, has reached 49.3% of the population on average (3). In the case of Indonesia, a survey by The Central Bureau of Statistics (BPS) in 2005 showed that of the 58.8 million families in Indonesia, just 3.66% have accessed the Internet (from home or at a kiosk, office or school) [4]. These figures indicate that in developing countries the Internet is not likely to be the citizens preferred medium for using e-government systems.

Despite these problems most e-government services in developing countries require access via the Internet. Governments have been trying to reduce the gap between people and Internet technology by providing learning centers and Internet training programs, building many Internet kiosks, and developing Internet infrastructure. Much more money and time is needed to promote the Internet-based e-government services to citizens in developing countries.

The literacy level of the population is also an issue in using the Internet to access services. Indonesia still has only 2.3% adult literacy [5]. If a large proportion of the population can not read or write then access via the Internet is not a viable option.

Using the current popular communications system for e-government is more likely to result in a successful implementation. Heeks [6] argues that the bigger the gap between the current system and new system, the greater the likelihood of failure; the smaller the gap, the more likely the new system will succeed. Therefore, research to discover the preferred or popular medium for accessing e-government services by citizens is important and should be completed before the government decides the e-government service channels and promotes the services. Accenture [1] found that

“Governments that take the time to form a clear picture of citizens’ channel preferences and usage patterns can significantly expand their ability to generate real value”.

From December 2006 to January 2007 a questionnaire was used to discover the preferred medium for an e-government system in Yogyakarta province-Indonesia. There were 545 respondents from 55 districts in 5 regencies (Kodya Yogyakarta, Sleman, Gunung Kidul, Kulon Progo and Bantul). Yogyakarta was chosen as the focus of this study because;

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- e-government infrastructure is already in place in this province and is regarded as one of the best e-government systems in Indonesia;
- Yogyakarta is the education city of Indonesia with students from all provinces in Indonesia studying in the city so it represents a “small Indonesia”. (It will however be more literate than the rest of Indonesia.)

The survey focused on which media citizens preferred to use when they want to communicate (for example give an opinion, comment, suggestion or criticism or make an inquiry) and which media they preferred when they want to conduct a transaction (for example transactions involving identity cards, driving licenses, and business licenses) with the public services. The survey also investigated their reasons for choosing the particular medium of communication. This paper will present and discuss the findings.

In the survey, five options for communicating and conducting transactions with government are given: personal contact, telephone, email and the Internet, short message service (SMS), and letter. People surveyed choose which is their preferred medium when they want to communicate with the government and which one is their preferred medium when conducting a transaction.

The last question of the survey investigated the main reason for choosing a particular medium.

Results of the survey are presented in figures 1, 2, and 3.

2. Findings

Most people still prefer personal contact

The survey showed that even though many technological communications and transaction channels have been established, most citizens in Yogyakarta still preferred personal contact for communicating with government (62%). For business transactions the figure was 30%.

Telephone is the most popular technological channel

The telephone was the most popular technological communication and transaction channel. Even though most e-government systems promote the Internet as the main channel for communicating and conducting transactions with the local authorities, the telephone—as the conventional medium using voice—is still the preferred means when people want to communicate with the local authorities and conduct transactions with the public services. 16% preferred using the telephone for communicating with the local government, rather than SMS, Internet (including email and chatting), letter and other communication media. For transactions with the public service (such as submitting documents, paying administration fees, informing and verifying personal data), when the services is available, people also chose the telephone as the preferred technological medium (26%). Using the telephone people are able to submit applications by fax, verify confidential information using a previously agreed password and pay fees via phone banking.

It is interesting to compare this finding with the survey by Accenture [1] covering e-government in five emerging countries (low Internet penetration, low current e-government use), eight developing countries (medium Internet penetration, medium e-government use) and nine advanced countries (high Internet penetration, high e-government use). The results are similar:

"Despite the relative savvy and familiarity with online government in advanced countries, the telephone continues to be the dominant means by which citizens communicate with government. Over the previous 12 months, 63 percent of respondents in these countries had used the telephone to interact with government, as opposed to only 31 percent who had used the Internet. The disparity is even greater in developing countries, where 60 percent had used the
telephone for government contact as opposed to just 18 percent who had used the Internet.”

Moreover, it is also found that telephone interaction increases in line with e-government development, so that even as a country becomes more familiar with e-government and the Internet in general, citizens’ use of the telephone as a contact method also increases.

There are at least two reasons why the telephone continues to be the favorite means of interaction with government:

First, as the respondents opinions in the questionnaires show, it reduces the time significantly (time efficient) and it is the easiest way of communicating. It is the easiest way because the telephone, both land line and mobile phones, are used by most Indonesian families. Even poor families have access to telephones.

A survey by The Central Bureau of Statistics (BPS) (Susenas) in 2005 showed that 2% of poor families in Indonesia have a mobile phone and home phone [4]. Access to public telephones has been provided across the country so telephones are the most convenient channel.

When comparing with the web, the telephone requires less mental investment: a citizen doesn’t need spend time becoming familiar with a website or searching fruitlessly. The telephone also has minimal literacy requirements. People just have to know the contact number and the oral language rather than being able to read and write.

The second reason is that the telephone provides the “human touch”. Indonesians, particularly Yogyakarta people, still trust and feel comfortable when talking to a real person (not just a machine). They feel that their needs are being met on an individual basis; they want to ensure that there is a particular person who will handle and address the problem accountably and adequately. Also, it provides some measure of reassurance that should further follow-up be needed, there will be a specific point of contact; a qualified person on the other end of the phone line, to interact with.

These reasons are supported by the survey results that showed most citizens in Yogyakarta preferred personal contact for communicating with government (62%) and for business transactions (30%).

The preference for telephone contact makes it clear that in developing e-government systems, the government should not invest all of the effort and resources in developing Internet communications. Other channels, particularly the telephone, should be considered as a critical channel for accessing e-government services.

However, the Accenture [1] research revealed some distinct dissatisfaction with telephone interactions between citizens and the government. People’s expectations are not being met by their call centre experience. Often the calls are passed from department to department for even the simplest query. The government typically has just prepared answers for the most frequently asked questions and other questions both simple and complex are referred to an expert.

The call centre staff is unable to help customers effectively because they do not have the expertise nor can they readily associate the caller with previous correspondence as the call centre is not integrated with the work flow system. As a result customers get frustrated and the call centre staff treat customers as adversaries.

In order to realize good call centre services, the government must organize and integrate the call centre system with the organization’s processes, and technology. The department should have as a target that all business can be taken care in just one call since it leads to a better customer experience and greater satisfaction as well as saving time and money for both the caller and the government.

SMS: a familiar alternative medium

SMS is the next preference as a communication channel between citizens and government in Yogyakarta. It is preferred to the Internet for communication (12% compared with 7%). As a transaction channel, SMS and the Internet have almost the same preferences (19% and 21%). These results are reasonable since the mobile phone penetration in Indonesia is higher than Internet penetration. A survey of poor families in Indonesia by BPS in 2005 revealed that there are more poor families who have a mobile phone than have a land line phone (19.96% compared with 13.11%). Yogyakarta has the second highest percentage of mobile phones in the Indonesian provinces (39.14%) only Riau province (53.49%) has a greater percentage [4].

Other reasons why SMS is more popular than the Internet include; the low cost of SMS messaging, SMS is easy to use (SMS literacy), the infrastructure is in place in almost all areas of Indonesia. Also owning a mobile phone costs much less than owning a computer.

These findings suggest that SMS should be considered as a strategic channel for delivering e-government services.

Internet

Despite being considered the most complete communications channel, the Internet is still not the preferred channel of communication for citizens in Yogyakarta. It is the fourth choice after personal contact, telephone and SMS. Reasons for its lack of popularity include the high cost of Internet access, Internet illiteracy, and the low penetration of the Internet.

Mail

Correspondence by letter was the least preferred option (3% for communication and 4% for transactions). The time taken and the uncertainty of communication were the main reasons given for not wanting to use the channel.

The time taken to write and send a letter as well as the time spent waiting for the response is much longer than for the other channels. Uncertainty factors include; there is no confirmation that the letter has been received by department, no indication that the letter is being processed, no information on who is handling the matter, or when there will be a resolution of the matter. Literacy is also a problem with mail.
3. Choosing an e-government medium

Knowing the reasons why citizens choose a particular e-government channel is important for government. The government then has a clear description of what citizens require from its e-government channels. This knowledge should then enable the government to design e-government services that use appropriate communications channels. Only then will e-government systems fulfill the expectation of citizens and be widely used.

This survey showed that time efficiency is the dominant reason (41%) when citizens choose an e-government channel. Next is ease of use (26%), guarantee of receipt and security of the transaction is next (14%), followed by cost (8%), efficiency of the process or bureaucracy (7%), and finally distance (4%).

These results indicate that if the local government of Yogyakarta province wants to increase the use of its e-government systems and improve the satisfaction of citizens accessing the systems, they should put time efficiency as the main target of the e-government systems. They should ensure that each e-government service reduces the time taken to complete a transaction when compared to face to face contact.

Other benefits of the of the systems should include; increasing the transparency of the transaction, reducing the cost, improving service delivery either in quality or spread to more of population and making the system easy to use.

4. Conclusions

It is important to know the preferred channels for accessing e-government services in order to increase the use of e-government systems by citizens. Knowing the channels will improve the government’s ability to deliver more satisfactory services to a larger segment of population.

Governments should develop and provide multi-channel services for the citizens. In case of Yogyakarta province, the telephone is the preferred medium for accessing e-government services if they can not make a personal contact with the officials. Therefore, call centre services should be put in place as an integrated system with other e-government channels and work flow processes. SMS is a familiar medium and should play a role in delivering e-government services. The Internet can play a role but its current low level of penetration limits its appeal for mass delivery of e-government services.

Finally, the e-government system in Yogyakarta province should be able to reduce the time taken in completing transactions and promote time efficiency.

References