E-Government's Service Quality; User perception Significance and Measurement

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Abstract
E-government refers to the deliverance of government information and/or services via digital methods. A better user experience can be achieved for people by effectively utilizing internet to handle exchange of information and services,. E-government has opened up a new avenue for enabling effective interaction between the government and the citizens, businesses and other frameworks which are under their supervision. E-government is seen as a gateway to a modernized government which; adapts to the need of time and evolves accordingly to better accommodate the needs of its stakeholders and to perform in a more systematic and efficient manner. User experience and the perception of the consumer plays a vital role in the success of any platform. So, this paper aims to justify how it is a major factor in defining e-government success. Also it will identify the key features necessary for any e-government platform. This paper also establishes a correlation between user convenience and satisfaction and how this impacts the sustainability of an e-government system.
Key words:
E-government, e-service, user perception.

1. Introduction

1.1 Defining E-Government

The term e-government refers to the government based services provided through the web. These services vary from engaging the citizens to supporting government operations. This is done mainly by utilizing the information technology and the internet. However, e-government is more comprehensively defined by the World Bank as under: E-Government refers to the use by government agencies of information technologies (Sharma, 2007) such as:

→ Wide Area Networks
→ Internet
→ Mobile Networks

These technologies can serve a variety of different ends such as:

→ Effective delivery of services to citizens
→ Interaction with the citizens and industries revolutionized

→ Active involvement of citizens in decision making process

The definition from the World Bank highlights the advantages that have been seen with the transition from traditional government practices to e-government. It has rendered a more transparent system that makes way for a profitable business experience in the favor of the government. E-government also leads to trust building between the government and the citizens because of the transparency in government's decisions and in its back of the stage scenarios.

On the other hand, United Nations refers E-government as a platform that utilizes the Internet to deliver government information and e-services to the citizens (Sharma, 2007).

The UN defines e-government in a more objective manner where it is highlighted that the major pillars holding up the e-government are the internet and the World Wide Web. These two domains have taken over every aspect of life completely and in a relatively short amount of time. So, it is apparent that modern day governments should capitalize this innovation via e-government. The inclusion of the internet and the government practices renders a more effective system for information sharing and business interactions.

1.2 What is E-Service?

E-service is the term coined to the act of providing government services through an electronic platform. The most commonly used electronic platform being the internet. The e-services are only successful in fulfilling their purpose if they are made:

• Effective
• Convenient
• Simple
• Uninterrupted
• Safe

Consumers nowadays are well aware of their needs, they will only opt for any service if they think it is beneficial for them and

provides a safe and user friendly environment for all their interactions. So in order to build a trustworthy platform for their businesses e-services should be up to the mark according to consumer's perceptions.

1.3 How E-Government Gained Precedence Over Traditional Practice?

- Relevant Government Information
  The concerned parties can access relevant government information in electronic form i.e. more quick and more reliable. Hence, it is a more convenient and efficient manner of handling and distributing information.
- On time Provision of Information
  In this form of information exchange the physical aspects do not pose as a hindrance to timely delivery of information. The concerned parties receive all relevant information in due time.
- People Empowerment
  The e-government has enabled people to be more involved in the government's decision making policy through easy access to information. The information has been made more readily available in order to keep people in the loop regarding government's policies and actions.
- Improved Productivity
  The government processes have been made more smooth and transparent with these online platforms. Information transfer, engaging with citizens, making payments and plethora of other activities have been made more accessible through the World Wide Web.
- Cost Savings
  The internet based services cut down on a number of expenses that were previously unavoidable because of the limitations of outreach. Internet has solved a number of such constraints and made way for a faster and more cost efficient approach for managing and providing such services.
- Public Participation
  E-government has also expanded the horizon where public participation in public policy decision-making is concerned. Not only people are informed about the policies in a timely manner but also their feedback can be easily acquired through these platforms.

2. Methodology

2.1 E-Governance Service Quality Defining Parameters

2.1.1 User-perceived Web Quality

Quality assurance analysis is necessary for web development since it is accessed by the large chunk of people, so it is vital to keep in check their perceptions about web quality. In this case the government's website has the potential to become a single all-inclusive access point to all the stake holders – citizens, customers, government employees and other

governments. In order to ensure the success of an e-government it is necessary to manage their perspective of the web service. The features of the web are characterized by:

- Innovativeness
- Instant Availability of Information
- Cost Effectiveness
- Consumer Interactivity

All these aspects lead the government to constantly evaluate the web service quality in order to satisfy its stake holders' needs. The users' perspective of the web service quality allows the government to attain timely feedback and take necessary corrective measures to improve its e-service strategies.

2.1.2 What Factors define Public Value?

It is evident that for a sustainable e-government set up the public perception of e-government is a leading determinant. For a successful venture, the services being provided through the online platform need to attain a certain level of:

- **Deliverance:** In order to be beneficial for the citizens it needs to be delivered on time and just as efficiently as handed personally. The services advertised over the website need to be fully functional and the procedure to acquire them should be user friendly, so that people are motivated to consider online methods rather than traditional without any hurdles.
- **Outcomes:** Definitive outcomes are what inspire trust and lead to a more sustainable online system where people know they will get the results they are looking for and through a much user-friendly procedure.
- **Trust:** The trust building initiates once the services are delivered timely and no discrepancy in interactions exist. The system is made transparent to people so that they can keep track of all the necessary information and be convinced that their information is safe and secure on this platform, without any privacy issues.
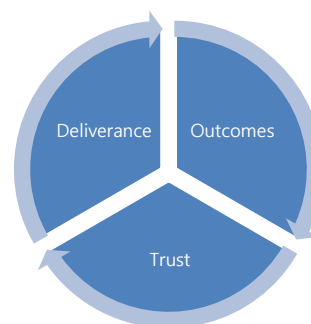

Figure 1: Factors defining Public Value

This is more intricately explained through Wang and Liao E-government success model as under:
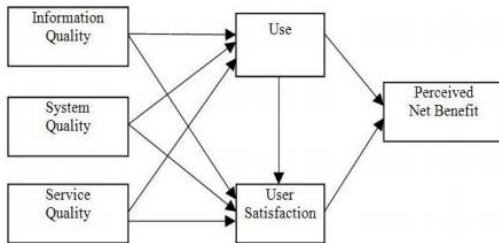
This model highlights that the success of any e-government is highly dependent on the user perception of the system. The user perception can be varied based on minute details such as the type of font used, color scheme used, the aesthetic of the platform etc. All these aspects are taken into consideration under a systematic categorization of these defining parameters in the section above.

3. Analysis
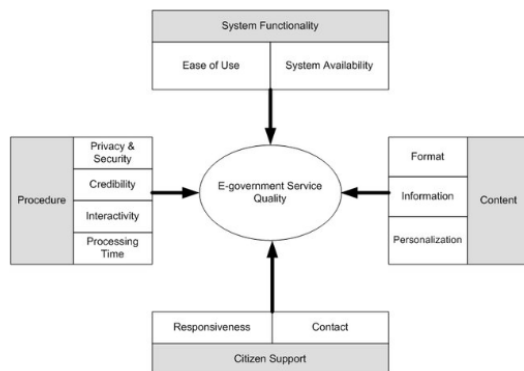
3.1 Online Service Quality

Figure 3: E-Government Service quality, aspect categories

There are essentially four categories of online service quality:

→   System Function
→   Content
→   Procedure
→   Citizen Support

Each of these categories encompass a vast variety of parameters. Some of them are explained below:

User Convenience
This refers to the ease of accessibility of the website and its navigation. The steps involved in any user interactive application should be easy to comprehend and follow to create convenience for the users.

Accessibility
The website should be running 24/7 and should be quick in loading different pages. Also, it is to be ensured that the website does not crash at peak time to avoid portrayal of negative image. Moreover, the system should allow users to access the link through any browser.

Presentation
The website should have a visually pleasant outlook and site logo. All the information should be displayed in an organized manner. Graphics should be added to grab user's attention where necessary, however, it should not be overly packed and cluttered. To better create convenience for users a site map should also be provided.

Data Sharing
The information provided should be accurate, relevant and updated on a periodic basis. However, the information should be conveyed in an easy to comprehend manner for the general public.

Customizability
The users should be offered customization options in terms of choice of language and font size. Also links of other e-government service websites should be listed down for the relevant query or application a user is looking for.

Information Protection
The user's information should be kept confidential; especially sensitive information like credit card details. The users should receive a last visit receipt via email or text message on every use so that they can keep track of any unusual activity.

Authenticity
The services that are advertised should be available at all times and must be delivered properly. The services should be inclusive of people's needs in minimal charges, so that it can cater to a large amount of population.

Timely Communication
The requested service processes should be intimated timely and in an organized manner to keep the consumer informed throughout the duration of the process. The time needed to complete a certain service should be communicated early to the consumers so that they can align their other tasks accordingly. A service expiration reminder should be issued and availability of new services should be notified.

Receptive System

Receptivity includes willingness to help users and direct when the request is not processed. The directions for any such queries should be delivered in a clear and concise manner. Ideally, by providing a support help chat in the platform.

Support Dimensions

Support Dimensions encompass customer support contact details, that means a phone number or an email address one could use for a particular query not addressed on the website. Also the address should be provided in case the consumer feels the need to personally visit and inquire about the services.

3.2   How to Acquire User Satisfaction?

Based on the defining parameters of user perception of the e-government service quality, the following categories can be formed that needs to be catered for user satisfaction:

3.2.1   Category 1: System Function

This category emphasizes on the PEOU i.e. Perceived Ease of Use and the PU i.e. Perceived Usefulness of a system in the determination of a successful e-government. This is further backed by a research on the correlation of PEOU and PU where it was determined that a mediator had a major impact (Mensah, 2016). The mediator in this case could be the computer self-efficacy among the people. This can be further aided by creating an online platform that is:

- **Easy to Use** According to Yoo and Donthu, online user satisfaction can be greatly swayed by the level ease provided by the platform and its usefulness, which in turn helps build up the trust in e-government (Mohammed Alanezi, 2012). <u>System is always available:</u> The system if found down or lagging may deter the people from future use. System availability should be diligently monitored by e-government service providers so that it could be accessed by the users at any hour without any hurdles. This is in line with Obi's research.

The basis of this analysis was how the efficient implementation of any service or system influence public perceptions. It can be concluded from these studies that a system that is readily available and easy to comprehend may inspire people to opt for e-services and subsequently ensure the success of an e-government.

3.2.2   Category 2: Content

Reports on electronic government highlights that, using IT to serve citizens effectively online is a struggle for many governments, particularly in developing countries. This statement was issued in terms of content of these websites as the websites' level of complexity and the provision of relevant information greatly effects people's acceptance of new technology such as proposed by e-government practices. The defining factors of any given e-government website content are:

- **Choice of Format:** <u>Choice of Format</u>: The format of any website is the first outlook and the foremost impression, the people get regarding the website, so it requires primary consideration. It needs to grab the user's attention in order to keep them engaged long enough to determine the website has the relevant information they are looking for (Sharma, 2007) (Mohammed Alanezi, 2012) , Obi also affirms that a visually attractive web design has a positive impact on e-government users and guarantees user satisfaction.

- **Delivering Relevant Information:** Secondly, the user should be able to spot the services and the information readily. The website should be considerate of the content they display, so that consumers' concerns maybe regarded without any additional redundant steps. Li and Suomi stated that online information plays an important role in a user's decision making capability and enables the user to take action based on the accurateness and availability of information on the website (Mohammed Alanezi, 2012).

- **Personal Touch**: Giving people the choice to personalize a website to their liking before proceeding with their task can help engage them on the website and ensure they invest enough time to figure out the usefulness of the website. This can be done by providing a preference of font size, language, brightness etc. Based on the SEVQUAL scale, each user requires attention on an individual level and this is made possible through the personalization and customization options offered by a website.

3.3   Category 3: Procedure

- E-government procedures involve interactions with the local authorities by means of a virtual help desk. These help desks aid the users in navigating their way around the web to acquire the desired service they are looking for quickly without wasting their valuable time. However, the simpler the procedure for online navigation the more engaging the help desk will be and hence the e-government setup will be successful. Some of the characteristics that users are looking for in any web based platform are:

- **Privacy and Security of Personal Information:** According to Kim, the privacy and security are matters of great concern to online users. If information is mishandled, or there is any risk of misuse involved, the number of website users will decrease.

- **Credibility of the Website:** This entails that all the services and information discussed on the website should be correct and not misleading. This is the

foundation of inspiring trust in users. Yang and Fang (Rahman, 2018), pointed out that customer satisfaction is adversely affected by dishonest practice in provision of e-government services.

- **Interactivity of the Website**: People tend to be attracted to the websites that let them engage and are responsive towards their questions and assessments. Obi once stated that interactive websites attract users more than static websites as users get a chance to express their views and initiate some action with interactive sites or portals.
- **Processing time of a service**: Overall impression of any website depends on its processing time. Processing of a service can be made tedious and cumbersome if it is prolonged beyond necessity. To keep the users engaged short processing and delivery time are crucial.

3.2.4 Category 4: Citizen Support

E-governments play a role in managing citizen request. For this an effective platform is necessary for receiving, organizing and timely processing the requests. The citizens feel more comfortable using a website that allows them to contact in case of any query and keeps them informed about the process. The two factors that any effective e-government should consider for citizen support are:

- Responsiveness: Users need to be engaged by ensuring their requests are handled timely and they are informed about it in due time. This is backed by Parasuraman's definition of responsiveness which defines it as effectiveness in handling of problems through the site in the e-commerce domain (Mohammed Alanezi, 2012).
- Contact Details: The contact details are simply the availability of assistance through telephone or online representatives (Mohammed Alanezi, 2012). This includes all the details by which a user can contact the organization regarding any query or request.

4. Results

The Consumer Perspective of E-Service Quality can be summarized as under.

System Function Category

Ease of use	System availability
- Simple navigation - Simplified online service procedure - Simplified registration procedure - Easy to access URL	24/7 Availability - Faster loading of pages - Does not lag during peak times - Accessible through all browsers

Content Category

Format	Information	Personalization
- Visually attractive - Aesthetical appearance - Attractive graphics - Less clutter - Prominent site logo - A site map	- Accurate and relevant information - Updated data - Easy comprehension - Self-Explanatory	- Choice of languages - Choice of font sizes - Hyper linked to other relevant e-government services websites

Procedural Category

Privacy and security	Credibility	Interactivity	Processing time
• Security of personal information • Last visit receipts • Privacy Policy issued	• All advertised services available • All services delivered properly • No discrepancy in service charges	• Step by step notification • Notification of expiration of a service • Notification of availability of a new service	• Ensure timely delivery of a service • Convenience for the consumer • Prior notification of processing time

Citizen Support Category

Responsiveness	Contact
• Help desk availability • Pending request status notification • Clarity and empathy in messages	• Availability of customer service 24/7 via the website • Help desk in case of inquiry or problem

5. CONCLUSION

E-government is the need of time as the world moves towards globalization. As the internet has taken over many of the daily practices, therefore, e-government is transitioning to a more abundantly used platform i.e. the Internet's widespread further improves the chances of its success. This paper concludes that the user perception of the e-government is what makes it successful or leads to its downfall. The user perception depends on a number of factors from the ease of use to the level of complexity of the website. Each factor has significance in building up user trust in the system and ultimately lead to a sustainable e-government set up. Successful E-government platforms integrate user convenience in every aspect of their system as this is crucial for attaining user satisfaction. Furthermore, users need to feel included in the decision making and be in the loop where major information is concerned. These factors add up to the overall user experience with the online system, which in turn has been simplified by the use of Internet and IT in the government communication systems.

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