Content Analysis of Selected Government Websites in Nigeria

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Abstract

The content analysis of websites of 10 selected Ministries of the Federal Government of Nigeria namely: Justice; Education; Information & Culture; Finance, Budget & National Planning; Labour & Productivity; Petroleum Resources; Power, Works & Housing; Science and Technology; Interior; and Agriculture & Rural development were examined in a five-stage model content analysis. Information dissemination, communication/user interaction, transaction, integration and security were assessed for functionality, accessibility, usability and citizen participation. The results indicated that all the sampled Federal Government Ministries have well-developed websites that are functional or operational, user-friendly and easy to access and navigate. However, they suffer the drawback of insecurity, dissemination of out-of-date information, the low user-engagement level and lack of interoperability and connectivity. The lack of integration of the government websites made impossible synergy among the Ministries and thus makes the exchange of information online impossible and hence lead to inefficiency in the delivery of public service to the populace.
Keywords: E-government, Five-Stage Model, Content-based Analysis, Websites.

Citation

1.   Introduction

Information and Communication Technologies (ICT) serve a means of improving the effectiveness of information and services delivery to the public. Government websites are increasingly becoming essential platforms for interaction between governments and citizens, business partners, employees, other agencies, and government entities (Karkin & Janssen, 2014). Consequently, electronic government websites are increasingly becoming popular globally, and it is being used as a tool for building better relationships between governments and the public. It makes interaction with citizens more efficient, smoother and easier (Rorissa & Demissie, 2010; Nawafleh *et. al.,* 2012). Also. it improves the administrative efficiencies of government activities and increases the development of citizens' trust in the government (Elbahnasawy, 2014; Jun, *et. al.,* 2014). Furthermore, Government websites allow greater access to government information and disclose government service procedures besides reducing the expenditure of both the governments and citizens (Symonds, 2000; Al-Kibsi, et al., 2001). Nonetheless, the examination of the public values on accessibility, citizen involvement, responsiveness, quality of information and services, quality and functionality of websites features, development of trust, dialogue and security are unsatisfactory (Silas & Lizette, 2018). The findings thus implied that the deployment of electronic government would not guarantee to improve governance procedures and citizens' satisfaction. It is necessary, therefore, to assess its performance once it is deployed.

Introduction and deployment of electronic government in Nigerian public service are in the infancy compared to the advanced nations of the world where artificial intelligence (AI) has taken over public and private businesses and well security mechanism were in place. However, electronic government websites are gathering momentum in the country. Its deployment is key to Nigeria's future and social well-being. Government websites through its focus on better understanding and meeting individual citizen's needs and creating opportunities for greater

public participation in government. It is necessary, therefore, to access the electronic government in the country to ascertain it meets its objectives.

Several studies have proposed content analysis as a basis for the examination of electronic government in different counties (Janet, 2002; Jitendra, 2007; Sandeep & Shalina, 2017). This study examined public values of selected Federal Government of Nigeria's Ministries, Department and Agencies based on content analysis of the websites.   Also, the study assessed functionality of the websites, the use of information technology in government, the public values and the impacts of electronic government websites on government and citizen relationship.

2.   Materials and Methods

This study examined websites of selected Ministries in Nigeria through the assessment of the websites' features, functionality, accessibility/usability and citizen participation. A five-stage model tool involving information, communication, transaction, accessibility and security was used for the website's content analysis. The model is depicted in Figure 1. The functionality, usability and citizen participation metrics were accessed on the website of each of the government Ministries. In all, 10 Federal Ministries were selected from the existing 28 Federal Ministries through which public services are discharged to the citizens. Government Ministries used for the study were the Ministries of Justice; Education; Information & Culture; Finance, Budget & National Planning; Labour & Productivity; Petroleum Resources; Power, Works & Housing; Science and Technology; Interior; and Agriculture & Rural Development. The study lasted 12 weeks.

The study accessed the functional status (i.e. enable or disable) some of the websites' features through the icons or words serving as a shortcut link to those public services. Also, the accessibility of the features and the webpage itself to the citizen was checked. A good website must be accessible to all regardless of expertise, personality, literacy, ethnicity, and disability. Furthermore, the rate at which people use or visit the websites because the structure of a good website should make navigation easy and the search engine more effective. A website must be designed in such a way that hypertext used in the browser will allow the user to transit from one web page to another. The robustness of a website encourages frequent usage of the websites. Full participation of citizen also plays a vital role in the life of electronic government websites, because the reason for establishing government websites is to serve the citizens' needs. All these were evaluated in the IT tools to determine the adoption of IT in an electronic government, this promotes good governance.

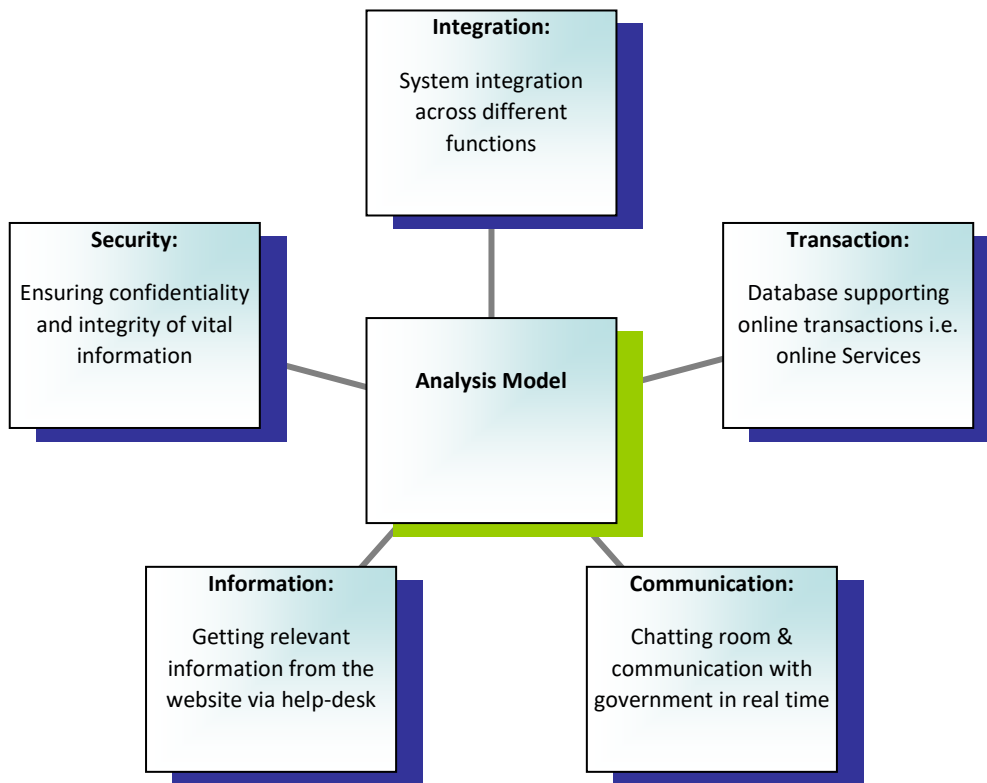The screenshots of the websites of the Ministries investigated are depicted in Figure 2.

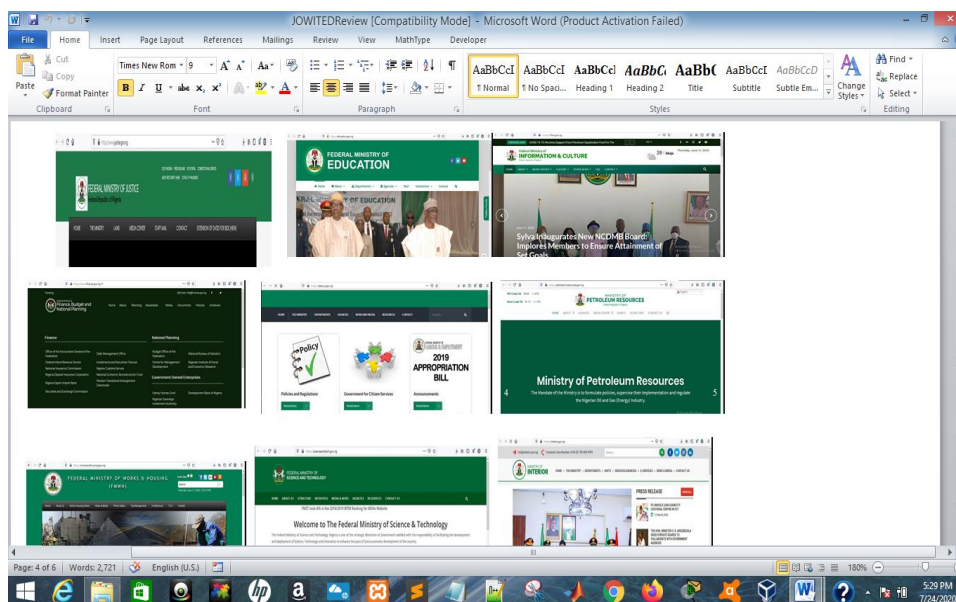Figure 1: A five-Stage website analysis model

Figure 2: Websites of selected Government Ministries

3. Results and Discussion

The website metrics were evaluated following every stage of the model in Figure 1.

Information: Content published online is an important tool in an electronic government. It must be timely, accurate, up-to-date and has a surprising value so that the citizen is well-informed and be abreast of news and development in the country. The online newsletter must be updated with current and useful information. The results of the analysis of information dissemination via the various government Ministries website are presented in Table 1.

Table 1. Content rating of government websites based on information

Government Ministry	Content Rating			
	Functionality	Accessibility	Usability	Citizen participation
Justice	Yes	Yes	No	No
Education	Yes	Yes	No	No
Information & Culture	Yes	Yes	No	No
Finance, Budget & National Planning	Yes	Yes	No	No
Labour & Productivity	Yes	Yes	No	No
Petroleum Resources	Yes	Yes	No	No
Power, Works & Housing	Yes	Yes	No	No
Science & Technology	Yes	Yes	No	No
Interior	Yes	Yes	No	No
Agriculture & Rural Development	Yes	Yes	No	No

Further to results presented in Table 1, it was observed that although the information features or news sections of all the selected websites were functional and accessible to citizens except people with disabilities. Also, help-desks were incorporated into some of the websites. Some of the contents published as at the time of the research were out-of-date, which made usability and citizen participation doubtful.

Communication: Social media serve a valuable means of communication. Hence the use of social networking services such as Yahoo mail and Gmail, twitter, blogs, chatbot interaction and communicating with the citizens is by far away from the delivery of government service to the populace. It enhances also, information dissemination. Table 2 shows the content analysis of the websites based on communication.

Table 2. Content rating of government websites based on communication

Government Ministry	Content Rating			
	Functionality	Accessibility	Usability	Citizen participation
Justice	No	No	No	No
Education	Yes	Yes	No	No
Information & Culture	Yes	Yes	No	No
Finance, Budget & National Planning	Yes	Yes	No	No
Labour & Productivity	No	No	No	No
Petroleum Resources	No	No	No	No
Power, Works & Housing	No	No	No	No
Science & Technology	Yes	Yes	No	No
Interior	No	No	No	No
Agriculture & Rural Development	No	No	No	No

The content analysis presented in Table 2 indicated that 40% of the government Ministries have online communication channels. However, whether or not the channels were operational could not be ascertained because attempts were made to communicate the Ministries via Email message were not successful. Response to Email to make enquires sent to the Ministries was not received as at the time of writing this paper. Therefore, acceptability, usability and public engagement/participation were not ascertained.

Transaction: The ability of the website to support online transactions was assessed. The assessment included receipt of payments for service, payment of taxes, levies and charges, generating and submitting information such as application and renewal of driver's license, application for land ownership, application for government job and other government activities. The results of content analysis based on ease of transacting business with the Government Ministries are shown in Table 3.

Table 3. Content rating of government websites based on transaction

Government Ministry	Content Rating			
	Functionality	Accessibility	Usability	Citizen participation
Justice	Yes	Yes	No	No
Education	Yes	Yes	No	No
Information & Culture	Yes	Yes	No	No
Finance, Budget & National Planning	Yes	Yes	Yes	No
Labour & Productivity	Yes	Yes	No	No
Petroleum Resources	Yes	Yes	No	No
Power, Works & Housing	Yes	Yes	No	No
Science & Technology	Yes	Yes	No	No
Interior	Yes	Yes	No	No
Agriculture & Rural Development	Yes	Yes	No	No

The results websites' contents analysis showed that online transactions were well developed in all the Ministries examined. It was evident that online transactions platforms in all the websites visited were functional or operational and accessible. However, there were no signs of usage of the transaction platforms in all ministries covered except in the Federal Ministry of Finance & National Planning. It was noticed that applicants for driver's license would rather than apply and make payment online would instead transact the business in the issuing Office or Department of the Ministry. The attitude implied that though the online platforms for transactions were created the usage level was low.

Integration: The websites were checked for interoperability among the Federal Ministries. It was to ascertain whether or not the software used by the Ministries were network such that the latter can exchange information where their operations overlap. For example, the Ministries of Education, Labour & Productivity, and Finance, Budget & National Planning would share information that would inform Government policy on Education in the country. The integration, therefore, support synergy between and among government Ministries, Departments and Agencies for a common goal. Consequently, government websites were assessed for integration or interoperability. The results showed that interoperability was not found among the Ministries through the websites examined. It implied that there was no synergy among the Ministries in terms of information sharing across their boundaries.

Security and Privacy: The websites were checked for the mechanism for securing confidential information and maintaining the privacy of the individual citizen. The results indicated that the security mechanism was not noticed in all the websites examined except that of the Federal Ministry of Finance, Budget and National Planning. The Finance Ministry made some of their activities offline instead of online for security reasons. Websites of other ministries covered were vulnerable to cyber-attacks. Indeed, the website of one of the Ministries covered suffered a phishing attack where citizens' account was hacked recently.

4.   Conclusion

It may be concluded that all the sampled Federal Government Ministries have well-developed websites that are functional or operational, user-friendly and easy to access and navigate. However, they suffer the drawback of insecurity, dissemination of out-of-date information, low user-engagement level and lack of interoperability and connectivity. The lack of integration of the government websites made impossible synergy among the Ministries and thus makes the exchange of information online impossible and hence lead to inefficiency in the delivery of public service to the populace.

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