

## Impact assessment of electronic mass communication in a tertiary institution

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### Abstract

The need for information is a human need that has been met in several ways. The advent of computers has increased this need. Notice boards, newsletters and public address systems have been the traditional medium in tertiary institutions. The proliferation of computer networks and Internet access opened new communication channels such as blogs, websites, e-mail, social media and mobile apps. In view of the current economic recession in Nigeria, tertiary institutions are turning to information technology for educational and communications solutions to reduce cost and maximize impact. This paper looked at the impact of adopting electronic mass communication in a tertiary institution. An online form was used to collect data for analysis. The respondents indicated a positive attitude to the use of electronic mass communication as an alternative to paper-based publications. An increased use of information technology-based solutions is recommended to tertiary institutions.

**Keywords:** *e-mail, mass communication, evaluation, university, Nigeria*

### Introduction

The University of Ibadan (UI) was established in 1948 for teaching, research and community service. It is the premier university in Nigeria with a College of Medicine having 4 faculties, and 9 faculties on the main campus. UI has a Distance Learning Centre, School of Business and a Postgraduate School. The University has a central library that houses special collections and resources. The University community is made up of approximately 6000 staff, 30000 students, 10000 distance learning students, and several guests.

UI recognizes the role and impact of information technology on education. In order to leverage the convergence of information technology and media technology, UI established the Directorate of Information Technology and Media Services (ITeMS). ITeMS has deployed several infrastructure and solutions for the adoption and use of information technology and media by staff and students for academic and administrative purposes (UI, 2015).

The University has an official communication product to the community called University Bulletin. It is issued periodically in paper format with two thousand five hundred (2500) copies printed regularly. The frequency of the publication is not fixed because the bulletin is produced whenever there is a need to provide information to the community. The paper bulletin is distributed via the Central Porters Lodge where all departments and units have letter boxes. The leftover bulletins are then made available to members of the community. The challenge of meeting the information need of the community led to the digitalization of

the University Bulletin. Scanned copies of the University Bulletin were made available on the website under the bulletin section. A new initiative was launched recently to provide the bulletin to members of the community via electronic mail (e-mail). The new initiative is an electronic bulletin (e-bulletin), i.e. a digital version of the existing University Bulletin, available in HTML format and as a pdf file. The html format makes it easy for stakeholders to read the bulletin using most web browsers or news app and on any device. The pdf file preserves the bulletin from accidental editing, allows multiple distributions and makes archival easy.

The production of the electronic bulletin is based on receiving an electronic copy of the approved news bulletin by email or on digital media (flash drive or CD/DVD). On receipt, it is formatted for HTML rendering; converted to a pdf file and the HTML format and pdf file sent to e-mail addresses of stakeholders. The production and delivery process does not exceed 48 working hours. The electronic bulletin is a fast and cheaper method of news delivery to stakeholders in the community. The electronic bulletin is environmental friendly because it reduces use of paper. It also personalizes the delivery to each recipients email address. In this work, the focus is to determine the impact the new initiative has had on the university community since paper production of the University bulletin was eliminated.

### **Literature review**

E-mail has been used positively for personal and official communications. It allows individuals work together across multiple locations. The benefits of e-mail communication listed by McKenna and Bargh (2000) include (1) physical distance is not an issue on the Internet, in a fraction of a second one can interact with someone at the other end of the globe, where regular mail takes days or even weeks; (2) the Internet is a speedy medium that allows us to reach a large group of people in one delivery; (3) absence of cues, unlike face to face communications, physical appearance and visual cues are absent in e-mail and (4) it is easier to be anonymous while communicating on the Internet. E-mail is no longer just a tool to communicate over long distance. Business deals are closed by e-mail, and a major part of the communication even with colleagues in close proximity takes place online (Renaud, Ramsay, & Hair, 2006). E-mail has the reputation to be less time-consuming, more reliable, and more efficient than a face-to-face meeting or a telephone conversation. There is evidence that e-mail encourages people to communicate more (Balter, 1998) and is critical for business operations. Contractor and Eisenberg (1990) found out that organizational communication increased when e-mail was introduced at work floor to replace aspects of face-to-face communications. The increase in e-mail use according to Sarbaugh-Thompson and Feldman(1998) did not decrease face-to-face and telephone interactions, but generated lower overall communication within the organization suggesting that e-mail is more efficient in communication. On further analysis it was revealed that electronic communication was not more efficient per se but that the reduction in casual communication (e.g. greetings, social talk at the coffee corner) was at the root of the decrease of communication.

Mobile e-mail devices such as smartphones, may affect social dynamics by enabling new forms of interaction and collaboration (Lyytinen & Yoo, 2002; Pica & Kakihara, 2003). A smartphone is a wireless device used to manage calendar, make phone calls, and browse the Internet as well as to receive and answer e-mails anytime, anywhere. It is a mobile tool that contains functions to facilitate work. Unlike the desktop computer, a smartphone is rarely separated from its owner thus making communication a continuous process.

Technology can generate information faster than most people can process it. As a consequence people often find themselves unable to cope with an increasing amount of information (Chan, 2001). Information overload originates both from own requests for information and information received inertly (Marcusohn, 1995). This information overload can lead to reduced productivity and can have negative effects on health and well-being (White & Dorman, 2000). According to CHC (2016) a survey conducted of its board members to determine their preferred communication methods i.e. email, text or phone call, for activities related to the board. Findings showed that majority of the respondents wanted the email communication to be once every two 2 weeks, the current formatting to be maintained, found it useful and informative about activities.

Waterloo (2015) carried out a student communications survey in January 2015 with 1,100 completed surveys and qualitative data collated from three student consultation groups. The students included undergraduates and postgraduates, citizens, permanent residents and foreign students in all faculties (Applied Health Sciences, Arts, Engineering, Environment, Mathematics and Sciences). The survey focused on three questions: how do Waterloo students want to be communicated with? how are Waterloo students using email and social media?; who do Waterloo students consider an important source of information? The analyzed responses indicate email and social media as preferred methods of communication; students checked their email and social media accounts regularly; and academic sources e.g. professors, academic advisers were considered as important sources of information.

Newsweaver(2014), conducted a global survey which spread across twelve industries. There were five hundred (500) respondents from small to global enterprises. The results gave an insight into the use of information technology to create, implement and measure employee communication strategies by internal communicators. E-mail was the most effective and most used channel for communication, while print was the least used. The respondents indicated plans to adopt social media tools for internal communications.

## **Methodology**

This work was done using a quantitative-based approach. An online form was designed with ten (10) questions. The uniform resource locator (URL) for the online survey was sent to all recipients of the e-bulletin i.e. via email addresses. The survey URL was sent twice (01 August 2016 and 10 August 2016) to all email addresses receiving the bulletin.

The ten questions in the questionnaire focused on gender, participant classification, Internet

access, device used to receive e-bulletin, reference to website for bulletin, printing of e-bulletin, format of e-bulletin, feedback on social media report, water report and electricity report, other reports expected via e-bulletin and satisfaction with the e-bulletin.

The collected data was analyzed using basic statistical tools.

### Findings and discussion

Table 1 shows a cross-tabulation of the gender and participant classification. The male respondents are more active digitally and are numerous than the female respondents.

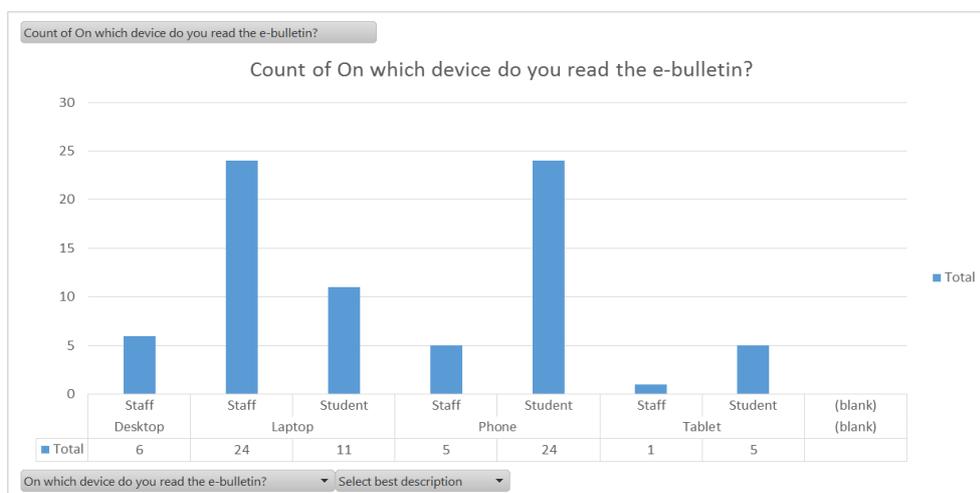
**Table 1: Gender and respondents categorization**

	Male	Female
Staff	23	12
Students	33	4
Alumni	1	0

There were 73 responses received via the online survey. The uniform resource locator (URL) for the online survey was sent to all recipients of the e-bulletin via email addresses.

The survey had 57 male participants and 16 female participants. The participation of more male respondents is an indication of the literacy level and adoption rate of technology based on gender. The classification of the participants showed that 23 were staff, 33 were students and one alumni. From the results, the email communication is received by both staff and students, while receipt by alumni needs to be improved. On the university website (<http://www.ui.edu.ng>) there is a link for interested persons to subscribe for the electronic bulletin. The ratio of participation by staff and students is almost the same thus indicating that staff and students receive the electronic bulletin.

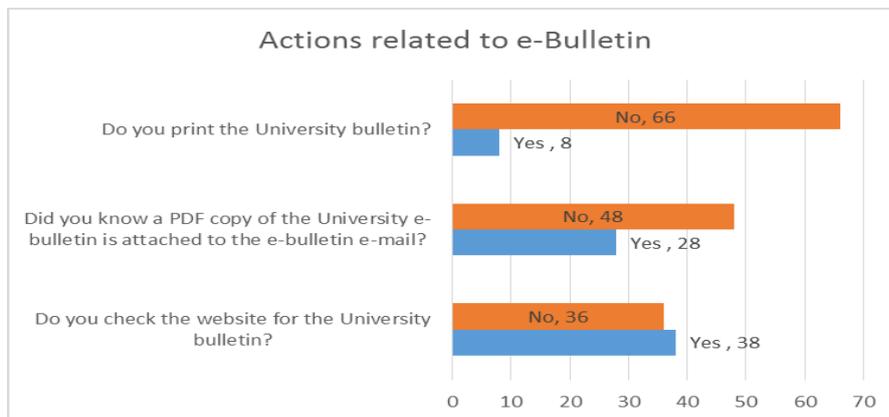
**Figure 1: Devices on which participants read the e-bulletin**



From Figure 1, it can be deduced that the laptop and mobile phone are the preferred devices

on which the bulletin is read. Further analysis of the responses indicates that 24 members of staff use the laptop for reading the bulletin, while 24 students use the mobile phone for reading. The preferred device type could be as a result of age, mobility or cost. The preparation of the content should take the screen size of the reading device into consideration.

**Figure 2: Chart of Participants knowledge about the bulletin**



The University bulletin is available in two formats and three locations so that subscribers have a choice of delivery method. The bulletin is located on the website under bulletin section, attached to the email as pdf file and within the email in HTML format. The clustered bar chart in Figure 2 represents participants’ knowledge and feelings about the bulletin. Figure 2 gives the number of participants who check the university website for the bulletin. The number of those who check is lower because participants already receive a copy of what is on the website by email. Figure 2 indicates that only 8 participants print the bulletin to read, while others read online. Also in Figure 2, 48 participants did not know that a pdf copy of the bulletin was attached to the e-mail containing the bulletin rendered in html.

**Table 2: Feedback on reports sent via e-mail**

Table 2 shows feedback on the weekly reports sent via the e-bulletin to the university community

Reports	Yes		No	
	count	%	count	%
Is the Social Media Report useful?	58	80.6	14	19.4
Is the Water Report useful?	58	81.7	13	18.3
Is the Electricity Report useful?	57	81.4	13	18.6

The counts of participants who find the reports useful and not useful are fairly consistent while 7 participants did not give any response. The social media report is a weekly summary of news about the University on the Internet users. The water report provides information

about the processing, storage, distribution and faults related to water supply in the student hostels and residential areas. The Electricity report provides statistics on electricity supply, distribution, faults, diesel purchase and generator use on the university campus.

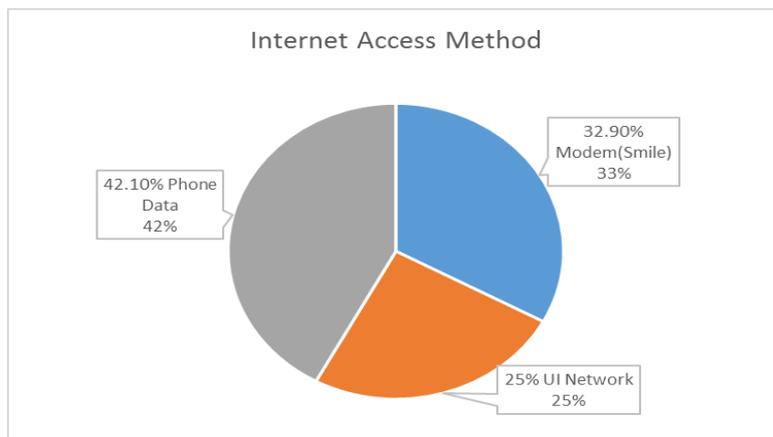
**Table 3: Grouped responses to other types of reports expected**

Table 3 shows responses to the open-ended question “what other reports should be sent through the e-bulletin?”

<b>Academic</b>	<b>Administrative</b>
<ul style="list-style-type: none"> <li>• Research outputs</li> <li>• Faculty information</li> <li>• Grants, Fellowships, Scholarships</li> <li>• Academic competitions</li> <li>• Student’s results</li> <li>• School calendar</li> <li>• Meetings</li> <li>• Call for papers</li> <li>• Workshops, trainings and seminars that will come up within the University</li> </ul>	<ul style="list-style-type: none"> <li>• Transportation fares</li> <li>• Vice-Chancellor’s activities</li> <li>• Names of students who participate in inter-varsity competitions;</li> <li>• Report on the students’ welfare, admission, etc.</li> <li>• Any completed construction projects</li> <li>• Internet Availability</li> <li>• Allocation and spending of resources</li> <li>• Examination Timetable</li> <li>• Accommodation report for those in line for accommodation space</li> </ul>

The responses have been grouped into academic and administrative reports for discussion. The responses related to “Everything happening in the University... opinions and ideas” and “All reports beneficial to everyone” were not grouped. The responses indicate that staff and students are willing to read about news and activities from the University as it relates to management, opportunities, academics and achievements. The units responsible for the requested information could be instructed to make it available for public knowledge.

**Figure 3: Chart showing Internet access method**



The respondents indicated three main ways of accessing the Internet. This question is relevant

because recipients might require Internet access to view the e-bulletin. The three access methods are: Phone data (42.1%); University of Ibadan Network (25%) and third party providers via modem e.g. Smile, Spectranet, etc (32.9%). This is represented in the pie chart of Figure 4. The University of Ibadan network (UINet) allows wired and wireless access within the campus. The low patronage could be an indication of users' perception of the Internet services provided. The mobile phone and modem are mobile and accessible when off campus although the cost is more.

## Conclusion

The need for information is great. Tertiary institutions generate a lot of information that need to be adequately disseminated to users within and outside the community. In this work, a traditional communication method was digitalized, implemented and evaluated for its impact. The assessment indicates that the users attach significance to the University bulletin, are satisfied with the format of the electronic bulletin, are interested in the provision of more content in the electronic bulletin and users prefer mobile devices to read the bulletin using Internet access from their smartphone or modem. Using electronic mass communication channels reduces cost, make archival easy and takes up less space while making production and distribution easy.

## References

- Balter, O. (1998). *Electronic mail in a working context*. Unpublished dissertation, Kungl Tekniska Hogskolan, Stockholm, Sweden
- Chan, S. U. (2001). The use of graphs as decision aids in relation to information overload and managerial decision quality. *Journal of Information Science*, 27, 417-425
- Contractor, N. S., & Eisenberg, E. M. (1990). Communication networks and new media in organizations. In J. Fulk & C. Steinfeld (Eds.), *Organizations and communication technology* (143-172). Newbury Park: Sage.
- Lyytinen, K. & Yoo, Y. (2002). Issues and challenges in ubiquitous computing. *Communications of the ACM*, 45, 63-65.
- McKenna, K. Y. A., & Bargh, J. A. (2000). Plan 9 from cyberspace: The implications of the Internet for personality and social psychology. *Personality and Social Psychology Review*, 4, 57-75.

Survey-of-MQSP-email-communication-Final.pdf

Newsweaver (2014) Internal Communications: Emerging Trends and the use of Technology, Retrieved from [http://cdn2.hubspot.net/hub/301060/file-544707668-pdf/Whitepapers\\_PDF/Survey\\_Report\\_Final.pdf](http://cdn2.hubspot.net/hub/301060/file-544707668-pdf/Whitepapers_PDF/Survey_Report_Final.pdf)

Pica, D., & Kakihara, M. (2003). *The duality of mobility: Designing fluid organizations*

*through stable interaction*. Paper presented at the 11th European Conference on Information Systems, Naples, Italy. .

Renaud, K., Ramsay, J., & Hair, M. (2006). You've got e-mail... Shall I deal with it now? Electronic mail from a recipient's perspective. *Journal of Human-Computer Interaction*, 21, 313-332.

Sarbaugh-Thompson, M., & Feldman, M. S. (1998). Electronic mail and organizational communication: Does saying "hi" really matter? *Organizational Science*, 9, 685-698.

University of Ibadan (2015) Strategic Plan 2014-2019

University of Waterloo (2015) Student Communications Survey: 2015 Results, Retrieved from [https://uwaterloo.ca/student-success/sites/ca.student-success/files/uploads/files/c008191\\_sso\\_student\\_comm\\_survey\\_report\\_lowres\\_final-s.pdf](https://uwaterloo.ca/student-success/sites/ca.student-success/files/uploads/files/c008191_sso_student_comm_survey_report_lowres_final-s.pdf)

White, M., & Dorman, S. M. (2000). Confronting information overload. *Journal of School Health*, 70, 160-161

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