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## **Mobile Phones for Library Services: Prospects for Delta State University Library, Abraka**

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### **Introduction**

Communication is the process of exchanging information, using a common protocol. As technology develops, communication protocols also evolve. The pattern of communication today is changing as new technologies emerge, changing the ways people communicate and organize information. In fact, it is the changing technology of communication that tends to make the most frequent and widespread changes in society (Edison, 2002). There are many instruments to aid communication, including public address systems, bulletin boards, etc. Some means of communication are relatively simple. Other forms of communication are more complex. Advanced forms of communication involve an entire system (Seymour, et al., 1987).

Mobile phones have revolutionized the daily lives of ordinary people. Mobile phones (also called cellular phone or cell phone) do not use wires or cables, but work with radio waves and can be carried about and used anywhere (Homby, 2001).

Before the advent of Information and Communication Technologies (ICTs), communication in the library was done through books, newspapers, microforms, slides, etc. As scientific knowledge increased, electronic communication systems began to develop. The use of telephones and computers led to the Internet. The application of telecommunications to an automated library system can bring more efficiency to library services. Just as the Global System for Mobile Communication (GSM) has revolutionized the daily lives of individuals, it can also enhance library operations. This study explores the prospect of providing library services with mobile phones in the Delta State University Library, Abraka, Nigeria.

The institution has a long and impressive history. It grew from the well-known Government Teachers' Training College, Abraka, which in the 1940s produced Grade II teachers to the reputable College of Education which awarded the Nigerian Certificate of Education (NCE). In affiliation to the University of Benin, it offered degree programmes until November 1985, when it became a Faculty of Education of the then Bendel State University, Ekpoma (now Ambrose Ali University, Ekpoma). It became fully autonomous on April 30, 1992 following the creation of Edo and Delta States in August 1991. There

are three campuses, one in each of the three senatorial districts of the state: Abraka Campus, Asaba campus and Oleh campus (Delta State University student's handbook, 2004).

The university library operates at the main campus at Abraka, with branches at Anwai, Asaba, and Oleh campuses. The library is partially automated and will offer an Online Public Access Catalogue (OPAC) when automation is complete. GSM services commenced operations in Delta State University, Abraka, with MTN in October 2003, Zain (earlier called Econet, Vmobile, and Cetel) followed on February 2004 and then Globalcom came in March 2005. Other networks are also finding their way into the university community. Mobile phone/GSM is a common sight in the hands of staff and students. It has helped to bridge the communication gap in and outside the university environment. GSM has made it possible for information in various formats to be retrieved, processed, stored, and disseminated.

### **Brief History of Mobile Phones/GSM in Nigeria**

GSM world (2004) explains that GSM supports more advanced data technologies. These technologies allow for a greater bandwidth and permit the development of mobile applications. According to Aragba-Akpore (2003), "GSM dominates the world today. As the most matured digital-cellular standard, GSM networks offer cellular switched data services well in advance of other networks." GSM is known as the second generations (2G) after the old analogue system, which was first generation (1G). The advent of GSM was revolutionary, especially because of its roaming capabilities.

Telecommunication services were introduced in Nigeria by the British Colonial Government in 1886 to facilitate colonial administration in the country. After independence, in 1966, there were only 18,724 telephone lines for use by a population of about 40 million people (Edison, 2002). In January 1985, the Post and Telecommunications Department split into a postal division and a telecommunication division. The latter was merged with the Nigerian External Telecommunication Limited (NITEL). Its main objective is to harmonize the planning and coordination of the internal and external telecommunications services (Edison, 2002). Two mobile cellular telephone networks were approved in September, 1997 by the Ministry of Communication and the Nigerian Communications Commission (NCC), which boost telecom services in Nigeria. The Nigerian Telecommunications limited (NITEL) cellular network and mobile Telecommunications services Limited (MTS), managed by NITEL cover Lagos, Enugu, and Abuja with a capacity of 10,000 lines having one mobile switching centre (MSC) in each area, while MTS Ltd. operates 5,000 cellular line capacity network based in Victoria Island, Lagos (Ndukwe, 2003).

Nigeria joined the world's digital cellular network in January 2001 with the licensing of private telecommunications operators by the regulatory body, Nigerian Communications Commission (NCC), established in 1992. There are four major Global Systems for Mobile Communication (GSM) service providers licensed in Nigeria. The providers are MTN Nigeria, Econet Wireless Limited or Vmobile (now Zain), NITEL (now MTel) and Globacom. Since 2002 when the last license was issued to Globacom by the NCC in Nigeria, several other service providers (Starcom, O-net, Multilink, Etisalat, Visafone, Zoom, etc) have emerged but have limited coverage.

GSM has created a environment for telephony for Nigeria. In December 2001, Engr. Ernest Ndukwe, the chief executive of Nigerian Communication Commission (NCC) called a press conference in Abuja to reflect on the year's activities. He could not hide his joy when he proudly announced to the world that "Nigeria now has over 280,000 mobile lines in just four months of GSM operation in Nigeria." According to Aihe (2001), "when the year comes to a close in a few hours time, most Nigerians will look back at 2001 as the year they were liberated from telecommunications backwardness. It is indeed like a dream. Something happened in the field of communications, putting to an end, all the propaganda that telephone is for the rich."

Thus, GSM has greatly improved the socioeconomic, security, and information-based sectors of the economy. Today, most parts of the country are covered by GSM, and even the street hawker takes

some time off to make calls (Aihe, 2005). In less than ten years since the GSM network was commercially launched in Europe, it became the world's leading and fastest growing mobile standard.

### **Mobile Phones and Library Services**

ICT has collapsed barriers and promoted fast communication and interactions across boundaries. The need to meet life's basic challenges and responsibilities has informed the invention and the use of information technologies (Ademodi and Adepoju, 2009). Libraries are deeply interested in channels for the transmission of information, such as telephones and telephone lines, cellular networks, cable television, and the Internet. Academic libraries are challenged in satisfying their customer's needs since their target market (researchers, lecturers, undergraduate, and postgraduate students) is demanding and dynamic. The Internet and World Wide Web (www) have made it possible for university teachers, researchers, and students to locate what they need without going to the library. If librarians in this sector are to continue to make substantial contributions as information disseminators, they will have to understand and exploit ICT infrastructure and emerging technologies in delivering services to their clientele (Ikhemuemhe, 2005).

Like most service institutions, academic libraries need to engage in marketing their products and services (Ekpenyong, 2003). From a marketing communications perspective, the challenge to most libraries is to attract users to the library and to retain them. Ekpenyong (2003) asserts that if librarians wish to remain relevant, they must focus on the information provider/user relationship. Communication and interaction are generally an important component of the process of relationship building. Popoola (2001) suggests that the university library must ensure a closer relationship with its clientele. He posits that it is imperative for academic libraries to publicize their information products and services to arouse user interest. O'Dell (2009) notes that those aged 18-29 are the heaviest users of libraries when they need problem-solving information.

Most academic libraries in Nigeria have started exploring the viability of Internet technologies. These would support library-to-user, user-to-library, and user-to-user online interactions. However, with the Internet connectivity constraints' in Nigeria, these options are not easily deployed. Hence, many institutions in Nigeria have to look inward at the already established facilities and infrastructure to make libraries more attractive and accessible (Ekpenyong, 2003).

According to Terplan (2000), "telephones and e-mail are important tools to facilitate prompt handling and response to the stream of patron questions from within and out of the library user community. Most university libraries have one phone line, which is mostly used for administrative purposes and located in the library administrator's office. Mobile phones could be deployed at the enquiring desks." Short Message Services (SMS) or text facilities available on all mobile phones, could be used to create awareness amongst the academic library clientele about upcoming events and new arrivals. This could be flashed through a facility called "broadcast" where one text message is sent to all the library contacts listed in the address book on the mobile phone at once.

Academic libraries need to keep abreast of the dynamically changing needs of their clienteles. One way of delivering user-centered services is library surveys. Surveys could be carried with text and multimedia messaging. Patrons could text a coded number to a particular phone line to indicate their preference. Specialized and personalized information services can be achieved using the wireless technologies made available to all. Renewal notifications could be sent to alert patrons that books are almost due or overdue.

Mobile websites offer free SMS to mobile phone services on the Internet. The literature reveals a great deal of information on the possible use of cell phones for Internet access via Wireless Application Protocol (WAP) technology. As cell phone technology continues to evolve, it could have as significant an impact on libraries as the Internet. Ironically today, a review of cell phone use in libraries only reveals

efforts to dissuade users from making or receiving calls within libraries. Few efforts are geared towards exploring ways that cell phone technology could be used to enhance library operations. However, GSM technology's acceptance and growth among the Nigerian populace has great potential for enhancing the services in libraries and information centers in Nigeria. Information managers as well as libraries should fully exploit the opportunities presented by this relatively new phenomenon with a view to providing improved products and services to the library users. Empowering the user is an important purpose of technology. It has come of age that library user's dream of an "information machine," which, as described by O'Dell (2009), should be:

- A mind reader
- intuitive, determining their information needs without their having to verbalize them.
- A one-stop source for information needs, using voice recognition and natural language to search to return a comprehensive collection of information sources
- portable
- ubiquitously accessible

Users want an information system that will meet their needs with far less stress and energy.

### **Purpose of the Study**

This study explores the prospect of providing library services with mobile phones at the Delta State University Library, Abraka. The objectives of the study are to:

- encourage librarians and library users in the use of GSM in library operations.
- examine the benefits derived from the use of GSM in library operations.
- discover possible problems affecting the use of GSM in library operations.
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### **Methodology**

A survey was used to explore respondents' perception of the use of mobile phones in library services. The total population from which sample was drawn is library users and staff of the Delta State University Library, Abraka. There are about 110 library staff and 5,000 registered users for the 2005/2006 session when this study was conducted. A simple random sampling technique was used for the selection of respondents. A total of 100 respondents were drawn from the student population and 50 from the staff population. A questionnaire was used as instrument for data collection and data were analyzed using simple percentage and frequency counts.

### **Discussion of Findings**

A total of 138 completed questionnaires were retrieved, 90 percent return rate for students and 48 percent for staff. The data collected shows that all the respondents have mobile phones of their own. They subscribe to one of the three major available networks or operators in the university community, Abraka. These are MTN (57, 63.33 percent) followed by Zain (18, 20 percent), and GLO (13, 14.45 percent). Two respondents also indicated MTEL (2.22 percent). Though that network is not in the university community, they can use it outside the university environment.

Table I: Services Enjoyed by Library Users

Operators	No. of Respondents	Percentage
Reference	43	47.77
Readers Service	18	20
Serials	11	12.22
Bindery	6	6.67
Charging and Discharging	5	5.55
Current awareness	7	7.79
TOTAL	90	100 percent

The Delta State University library provides a number of services to meet user information needs. These include reference, serials, bindery, loan, current awareness, inter-library loan services, and others. The library does not provide Internet, OPAC, or GSM. Library patrons have benefited from the other services provided by the library.

Table II shows that nearly 65 percent of staff respondents stated that library users are aware of all services rendered in the library. The students claim to be aware of all library services. Ekpenyong (2003) revealed that only about half of matriculated students register in the library. This stems from the library's inability to reach the academic community by alerting them to available resources. GSM is not one of the services provided by DELSU library, but student respondents desire its use for library services. Library users have personal phones but they are usually not allowed to use them for library services. Signs in the library read "Use of GSM is prohibited", "Please switch off your phone." Hence, 100 percent of respondents indicated that GSM phones are not used for library services.

GSM can be applied to reference and readers' services and will encourage use of library facilities. Staff respondents believe that use of GSM in library services will help users in the following ways: transmission of information over long distances; easy exchange of information between staff and users; enhancement of ICT-related services; provision of improved products and services; alerting users to available resources; creating awareness about upcoming events; and sending renewal notices.

Table II: Users' Awareness of Services Rendered by the Library

Option	Staff		Students	
	Number	Percentage	Number	Percentage
Yes	31	64.59	90	100
No	17	35.41	-	-
Total	48	100	90	100

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More than 20 percent of staff respondents believe that GSM is necessary for library-to-user interactions because it supports all of user-to-user online interaction, while an almost equal number say that it attracts and retains users.

Table III: Benefits of Providing Mobile Phone Library Service

Operators	Number	Percentage
To support all of Library-to-user online interaction	11	22.92
To support all of user-to-Library online interaction	5	10.42
To support all of user-to-user online interaction	7	14.58
To attract users to the library and retain them	9	18.75
All of the above	16	33.33
TOTAL	48	100 percent

All student respondents stated that GSM is necessary for library operations because of a number of benefits. There are problems for the library in providing mobile phone library services, however. These include lack of telecommunication infrastructure in the library (17, 18.91 percent); high cost of telecommunication (5, 5.55 percent); high cost of calls (tariff) from the operators (7, 7.78 percent); interconnectivity problems (6, 6.66 percent); network congestion/call failure (11, 12.22 percent); delay/undelivered text messages (7, 7.77 percent); neglect on the part of library management (9, 10 percent); and abuse on the part of library users (1, 1.11 percent). While these are the views of staff, library users complained of other problems. These are switching off mobile phones in the library (57, 63.33 percent); high cost of calls (tariff) (18, 20 percent); network problems 13 (14.45 percent); and abuse 2 (2.22 percent) by users.

The result further revealed that no good user/staff interaction or relationship in the library. It is presumed that with a high proportion of library staff and users owning a GSM phone, a proper education on its use and integration into library operations would go a long way in enhancing staff/user relationship. Allowing a communication flow between users and staff on their information needs will facilitate this service avenue. A majority of respondents suggested that the library should provide good telecommunication facilities to enhance GSM in library services, while others suggested that the library should be fully automated to enhance mobile phone use in library services. All the respondents agreed that GSM should be incorporated into library services. It will help provide improved products and service delivery to library users and improve their relationship with the library.

### Conclusion and Recommendation

Librarians believe that GSM many library services. This study revealed that DELSU library does not use mobile phones for library services as a result of lack of telecommunication infrastructure, high costs, problems with the technology, and lack of staff training and awareness. Since a majority of library users own a mobile phone, incorporating it into library services will promote a good relationship between library users and staff and enhance library services, which will attract and retain users.

The academic library's heightened reliance on ICT challenges librarians' status and role as knowledge workers (O'Dell, 2009). ICT provides students with a broad perspective. Maharana, Biswal and Sahu (2009) found that students will not be effective unless ICT tools and techniques are used in the educational process. Further, it is evident from this data that the students realize that ICT tools and techniques should become a part of their education.

Just as GSM has revolutionized the daily lives of individuals, it can also enhance and improve library operations. With the availability of full Internet service in the Delta State University library, Abraka, GSM usage could be facilitated.

Based on the findings of this study, the following recommendations are made:

- Library management should explore the possibility of providing mobile phone library services while liaising with mobile phone operators with improved transmitting frequency to avoid network failure at reduced tariff.
- Telecommunication infrastructures should be put in place for efficient and effective communication between library users and staff, which will engender mobile phone library services.
- Library users and staff should be educated on the proper use of mobile phone for library services, to eliminate abuse.
- Each section of the library should have a GSM set for that purpose.
- Information desk (infoseek) should be provided in the library with a staff and Internet/intranet connectivity within the library.

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