

# THE INTERNET AS A TOOL FOR INFORMATION AND EDUCATION: THE CASE OF OTA COMMUNITY IN NIGERIA

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## **Abstract**

One of the best known traditional functions of the mass media is to foster education. The mass media aid both formal and informal education: the ultimate instruments for national development. The Internet has revolutionized communication and consequently, the nature and the structure of education. This study examines the Internet access and usage among residents of Ado-Odo Ota local government area of Ogun State in Nigeria. It is commonly said that we live in an information age. Nothing has changed the nature as well as the process of sharing information and knowledge as the advent of the Internet. The potentials of the Internet have been so celebrated that several scholars have described it as the leveler of the differences between the information rich and information poor nations. Considering the seemingly limitless information and educational materials on the Internet; it is also assumed that every society would have equal right to development. However, the issue of access has limited the seeming advantages derivable from the Internet, particularly in the developing world, of which Nigeria is one. This study explores 16 communities' access to the Internet, their means of accessing it and levels of benefits. The survey method was used for the study. For societies to benefit from the Internet, the barrier of availability must be surmounted.

Keywords: Internet, Communication, Education, Access.

## **1 INTRODUCTION**

The Internet, the newest vehicle of communication, has acquired a phenomenally higher rise above other channels of communication. Even in the rural communities of the developing world, the only facility necessary to have access to the Internet is a mobile phone. Not only are such phones available, they are affordable. Perhaps the only obstacle to the effective and efficient deployment of the new facility is electricity to charge the telephones when they have used up their power, the absence of Internet connectivity and also the lack of knowledge of how to use the Internet and what to use it for.

Thus, we see that the Internet is a viable tool in the hands of a communicator and his audience as well as the teacher and his students. Just as the Internet widened the horizon of communication, in its diverse forms, so has it expanded the frontiers of knowledge in ways hardly imagined two decades ago. The watershed of the *Arab Spring* (Rosiny, 2012; Stepan & Linz, 2013) and the lingering effect of it, not only in the Arab countries but also in different parts of the world, is proof positive of the gains or deficits of the influence of the Internet on our lives.

The social media have come alive with the intervention of the Internet in communication and seriously demystified the power of the state in gagging the freedom of expression in totalitarian and less developed regions of the world. Equally, the Internet is witting down the overbearing authority of the teacher and the classroom in the acquisition and dissemination of knowledge today.

Indeed, Marshal McLuhan's (1973) *global village* is fast turning into a global family courtesy of the Internet. Unless the world leaders get together and engage themselves seriously in how the potentially negative power of the social media can be turned to positive energy for the social good, the world order might soon become so muddled that the world might be in a long period of turmoil. The theory of technological determinism as expounded by Marshall McLuhan (1962) explains that technology shapes the society. The basic thesis of technological determinism is that "media technology shapes how we, as individuals, in a society think, feel, act, and how our society operates as we move from one technological age to another" According to McLuhan, new technologies bring new changes to the society and consequently affect how the people in that society behave. In other words, the current technology determines how members of a society think, feel and act as their society moves from one level of technological age to another. McLuhan describes four technological ages: the tribal, literate, print, and electronic. Folarin (2002, pp. 128- 129) construes these to be the oral, visual/linear, electric-electronic and space-satellite stages of human communication. The oral period was the time when

people lived near each other in communal settlements. They communicated orally. During the visual/linear era, people shared information beyond their immediate settlements because printing allowed the mass production of materials and literacy grew. The electric-electronic age brought in television and on the spot reportage of issues from any part of the world. Thus, the world became a global village. The space-satellite age continued the electric-electronic age and brought man into inter-terrestrial communication. Information highways, super computers and satellites are the order of our present day. This age is epitomized with the advancement of the Internet. According to Aririguzoh (2013, p.120) "Communication methods shape human existence. Changes in communication technology inevitably create changes in both culture and the social order." This is because the society is shaped by how it processes and distributes information. New ways of communicating creates new relationships.

In developing nations, particularly where the culture of reading, especially hard, pedagogically educative material, is fast fading, the Internet is poised to erode the role of formal education, as we know and give it today. The fascination that the Internet has brought into teaching and acquisition of knowledge has encouraged the rapidly growing interest in the adoption and application of the Internet to practically every aspect of life. Whether education is communicated formally or informally, a form of technology is needed. Education is a form of communication. Both teachers and the taught adapt to new forms of technology in order to relate with each other. The development of the Internet has re-shaped how people learn. Massive data are stored in online databases. Most are available at the click of a button. It can, therefore, be inferred that the Internet – a communication technology - is important and affects education. How we learn or teach today is being revolutionized by the Internet that has effectively changed human communication.

We know that learning takes place in a social environment. The observational learning or social learning theory occurs when an observer's behaviour changes from watching the behaviour of a model (Bandura, 1986). Social learning theorists tell us that people learn from others through observation, imitation, and modeling.

## **2 EXPECTATIONS**

The debates on the need for ICT as a necessary condition for industrial growth and development and the parlous state of the economy and infrastructure in Africa, south of the Sahara desert, led to a number of expectations and assumptions in designing this study. The first expectation was that because of the educational and industrial infrastructure in this locality in Ogun State, many people would be aware of the existence of the Internet. Paradoxically, we had also assumed that because of the near nonfunctional state of some facilities, for example, electricity, and poor financial status, many people might not be exposed to, or indeed, be using it. We also assumed that both the educational and occupational statuses of the people would impact negatively on the people's knowledge and use of the Internet.

## **3 LITERATURE REVIEW**

Without any doubt, information is valuable to people's day-to-day activities. The quality of information available tends to determine the quality of decisions made or plans executed (Oyegade, Nassarawa, and Mokogwu, 2002). Unfortunately, information is never equally available to all societies. Feathers (2004) explains this disparity by making reference to the concept of information rich and information poor. Information rich refers to "a country, an organization or an individual with the information that is needed to carry out the task at hand" (p.121). Conversely, therefore, it can be said that information poor refers to the unavailability of necessary information to execute a task. We can further aver that superior access to information gives the recipient an advantage while inferior access to information does the opposite.

The Internet has been suggested as a potential "leveler" of the playing field that would allow nations with moderate development levels to catch up with postindustrial societies (Norris, 2000, p.2). It was further suggested that once the barriers of access have been overcome, it would be discovered that the new technology provides a relatively cheap and efficient service to poorer nations. Other benefits of the Internet, as advanced by its proponents, include the ability to generate, process, retrieve and disseminate information in real time. High quality information on several subjects are also available in various formats such as documents, graphics, audio/visuals, etc (Ajegbomogun and Popoola, 2014, p.157)

But how easy is it to leave the “barriers of access” behind? There had been growing concerns expressed by international agencies such as United Nations Development Program (UNDP), the International Telecommunications Union (ITU) and the World Bank, among others, that the advent of the Internet may further widen the digital divide (Norris, 2000, p.2).

The Internet does not only have the potential of allowing poorer nations to catch-up with information rich societies, it can also potentially enhance the marginalization of such nations. The disparity in the availability of information to communities, particularly in relation to technology, has been captured in literature as the digital divide (Dewan, Ganley and Kraemer, 2010; Pearce and Rice, 2013; Park, 2014). Digital divide was used originally to describe the gap that existed between “advantaged and disadvantaged computer users and nonusers in the United States and often focuses on socioeconomic difference” (Pearce and Rice, 2013, p.722). The concept has, however, been applied to the widening information technological gap between developed and developing countries (Dewan, Ganley and Kraemer, 2010). DiMaggio, Hargittai, Neuman and Robinson (2001, p.310) also describe digital divide as unequal access to the Internet in terms of “extent of use, knowledge of search strategies, quality of technical connections and social support, ability to evaluate the quality of information, and diversity of users”.

Pearce and Rice (2013) identify the main thrust of digital divide argument to be based on the Matthew effect, which states that the poor get poorer while the rich get richer. While the Internet’s seemingly limitless and free supply of information might be expected to reduce inequalities, major challenges of access, interest, demographic differences, infrastructure and skills, among others remain sacrosanct. Majority of the components mentioned above are functions of the financial resources available to aid the availability of the Internet.

Nevertheless, the proliferation of mobile communication has restored the initial hope of managing the “access barrier” of the internet. In the International Telecommunications Union report of 2010, it was claimed that more than five billion people in the world use mobile phones, “making it the most popular and rapidly adopted information communication technology in history (Humphreys, Pape and Karnowski, 2013, p.491). This development has doubtlessly influenced internet usage such that Meeker, Devit and Wu (2010) predicted that by 2015, more people worldwide were likely to access the Internet through their mobile devices than they should through their desktop computers.

Nigeria is not left out of the global surge of mobile communication. The Figure above presents the subscribers statistics for Global System for Mobile Communications (GSM), Code Division Multiple Access (CDMA) and fixed wired/wireless in Nigeria. In 14 months, December 2013 to January 2015, the number of connected GSM lines increased from 159, 758, 538 to 187, 947, 397. This means that additional 28, 188, 859 was recorded within the period. This is doubtlessly an impressive development. Despite the obvious fact that not all registered lines are active, 138, 530, 830 active lines as at January 2015 is not a mean feat.

Considering the figure above, Meeker, Devit and Wu’s (2010) prediction is not farfetched anymore. Also, since all mobile communication networks in Nigeria also provide Internet packages and mobile devices are enabled for such services, it should be expected that the “access barrier” is fast becoming history. As at 2013, Nigeria had a total of 48.3 million mobile phone subscribers who actively browsed the Internet through their phones (Amaefule, 2013). Hence, the proliferation of mobile communication has engendered greater access to the Internet. This obviously, would enhance the synergy between the use of the Internet for communication and education.

#### **4 RESEARCH DESIGN**

Based on the above assumptions and premising our expectations on the findings of Aririguzoh (2014), we designed this study. Two of the researchers, Dr Stella Aririguzoh and Dr Lanre Amodu conducted face-to-face interviews with 800 respondents over a three-week period. Seven hundred and eleven responses, making 88.9% response rate, were useful. The Scientific Package for Social Sciences (SPSS) was used to analyze the data. Simple frequency tables, cross tabulations and pie charts were used in discussing the data.

With the ubiquity of the new communication window, this study aims at finding out how much awareness exists among 16 communities of Ado-Odo/Ota Local Government Area of Ogun State of Nigeria. Ado-Odo/Ota is one of the 20 local government areas of Ogun State. According to the 2006 Census, it has a population of 526,565 people. Ota is the industrial town of the state. It is home to many industrial and commercial complexes. It is bounded in the south by Lagos, the former capital of

Nigeria and the commercial capital of the country. Ota is 878 square kilometers in size; it is home to three universities; two polytechnics; several other training institutions and an impressive number of secondary schools. Thus, this local council area, from which 16 communities were randomly selected (Sobowale, 2008), has all the trappings of a locale where interest in information and communication technology (ICT) should ordinarily be high.

## 5 RESULTS

Although more than half of those interviewed (54%), said they knew how to use the computer, only about half of them claimed they owned computers. Of those who said they did not have computers of their own, 49.9% of them said they had easy access to computers, if they needed to use them.

What is clear from the above statistics is that acquiring computer did not seem to be a priority among the people regardless of the educational and industrial infrastructure in the local government. The explanation from this situation probably exists in the fact that the institutions of higher learning, particularly the universities and other post-secondary ones, were mainly residential. Thus, their influence in the communities where they were located was limited. Also, the faculty and students in these institutions must have come from different places, even probably outside of Ogun State, where the local government is situated. With the unhealthy state of the economy, purchasing a computer (laptop) was not likely to be the pre-occupation of many people, in the face of multitudes of financial obligations that could only be barely met, including eating three good meals a day and paying exorbitant house rents monthly. And high school fees for their children.

About two-thirds of the population, 65.8%, in the 16 communities had knowledge of the Internet. Fewer than this number but more than half of the population, 57.9%, had used the Internet before. Regarding the ease with which they used the Internet, only just above one quarter, 26.4%, could use online facilities “most easily” while about the same number, 24.2%, claimed they could use online facilities “easily enough”. About one in five persons (21.5%), could use these facilities with difficulty, if not assisted.

Knowledge of, and ability to use the social media are some of key indicators of familiarity with the Internet. More than half of the interviewees (51.9%), used ICT to interact on the *Facebook* while 12.7%, use it to read mails. Only 8.2% use it to access data bases. The largest group of the respondents, 27.3%, did not have access to any of the social media.

Table 1: Specific Uses people make of the Internet.

<b>Responses</b>	<b>%</b>
Make new friends	23.1
Send e-mails	7.9
Search for new businesses	7.0
Do office work	4.1
Search for information	22.5
Call up data	1.0
Uploading information	1.4
Downloading information	4.4
Others (Please Specify)	3.0
Do not even use it for anything	25.7
<b>Total</b>	<b>100.0</b>

Table 1 shows the specific functions our respondents used the Internet to perform. Two major tasks stand out; making new friends and searching for information from diverse sources. Both of these values have about equal appeal to the respondents: 23.1% and 22.5% respectively. If we assumed that information seeking is an important aspect of education, then it becomes obvious that the educational value of the Internet is enormous. Uploading and downloading of information are still a part of education. Apart from the skills required to perform either task, the information, thus shared,

enhances the process of education as each task extends the sphere/scope of education impartation and acquisition.

Table 2: Regularity of Internet use.

<b>Responses</b>	<b>%</b>
Everyday	26.2
Every other day	9.0
At least twice in a week	20.7
At least once in a week	13.6
Do not use it	30.5
<b>Total</b>	<b>100.0</b>

More than a quarter of the respondents, 26.2%, said they used the Internet daily. This contrasts with those who said they used the Internet at least twice a week (20.7%). Close to a third never used it at all.

Table 3: Time spent on-line in a day.

<b>Responses</b>	<b>%</b>
1-2 hours	42.2
3-5 hours	16.0
6-8 hours	3.9
9-11 hours	1.8
More than 12 hours	4.4
Do not spend any time	31.6
<b>Total</b>	<b>100.0</b>

Those who claimed they spent between one and two hours daily using their online facilities constituted the majority of our respondents (42.2%). This group is followed by those who claimed they never spent any time on the net (31.1%).

Table 4: Where internet facilities are used most.

<b>Responses</b>	<b>%</b>
Home	38.1
Office	9.8
Cybercafe	18.1
Others (Pls, Specify)	4.5
Not Available	29.5
<b>Total</b>	<b>100.0</b>

It is interesting to note that a majority of 38.1%, claimed to be using the Internet at home, against 29.5% that used cybercafé. The importance of Table 4 is that Nigerians are prepared to invest in self-improvement going by the relatively high number of close to a fifth that claimed they frequented the cybercafé.

Table 5: How Internet is accessed.

<b>Responses</b>	<b>%</b>
Cybercafé	17.2
Office facility	6.3
Personal subscription	9.8
Mobile phone	34.9
Others (Specify)	2.7
Not Available	29.1
<b>Total</b>	<b>100.0</b>

For those who use the Internet among the respondents, mobile phones are the easiest means of accessing the Internet. More than a third of those who participated in the exercise, 34.9%, claimed they accessed the Internet through their mobile phones. About 17%, used the cybercafé while almost one in ten (9.6%) subscribed to the facilities. Some (6.3%) said they used the facility in their offices. Majority of the respondents (30.8%) said they used the Internet for educational purposes. Social networking (11.1%), business (10.0%), entertainment (9.3%) and news (6.2%) are other reasons why they used the Internet.

More than half of those who said they were restricted in the use of the Internet (52.7%), mentioned lack of the facility as the hindrance. About 12% mentioned inaccessibility to computers as a problem. Poor knowledge of the use of computer (11.8%) has been mentioned as an obstacle to benefiting from the Internet facility.

Poverty, as reflected in inability to get money to buy air time at cybercafés, inability to log into the Internet, poor browsing skill and erratic power supply, are part of the challenges limiting access to the Internet.

Table 6: Influence of locality on what the Internet is used for.

<b>Responses</b>	<b>Community Description</b>		
	<b>Urban %</b>	<b>Semi-Urban %</b>	<b>Rural %</b>
Education	34.2	30.7	22.0
Entertainment	10.7	7.3	10.2
News	6.3	5.5	7.6
Business	10.3	9.1	11.0
Social networking	12.5	10.2	9.3
Others (Specify)	4.4	4.0	
Not Available	21.6	33.2	39.8
<b>Total</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>
<b>n</b>	<b>319</b>	<b>274</b>	<b>118</b>

Table 6 shows that location is positively related to the use of the Internet for education. The locale of the respondents is shown as positively correlated with the uses of the Internet for social networking. Other relationships do not portray regular patterns.

Table 7: Reasons for which males and females use the Internet.

Responses	What is your gender	
	Male	Female
Education	29.8	31.8
Entertainment	10.3	8.2
News	9.5	2.8
Business	10.3	9.7
Social networking	12.5	9.7
Others (Specify)	3.9	3.1
Not Available	23.7	34.7
<b>Total</b>	<b>100.0</b>	<b>100.0</b>
<b>n</b>	<b>359</b>	<b>352</b>

In table 7, it is curious that female tend to use the Internet more for education than their male counterparts. Men, on the hand, tend to use the technology more for entertainment and news than the women, although men, significantly more than women, use the Internet for news.

Table 8: How educational status influences what the Internet is used for.

Responses	Educational status					
	None	Primary	Secondary	OND/NCE/ Degree	MSc/MA/ M.Phil/Ph.D	Others
Education	16.2	24.8	31.9	39.8	33.3	35.7
Entertainment	4.1	5.9	11.4	9.7	19.0	14.3
News	2.7	5.2	6.6	7.4	9.5	7.1
Business	2.7	6.5	8.8	15.9	23.8	14.3
Social networking	1.4	8.5	14.7	13.6		7.1
Others (Specify)	4.1	3.3	4.0	2.3	4.8	7.1
Not Available	68.9	45.8	22.7	11.4	9.5	14.3
<b>Total</b>	100	100	100	100	100	100
<b>n</b>	74	153	273	176	21	14

Educational attainment is shown in table 8 as significantly more related to use for education at the lower and middle levels, up to the first degree. Those in upper education echelon tend to use the Internet more for business.

## 6 CONCLUSION

It is clear from the presentation above that the Internet has considerable applicability to education, both at the former and informal level. This is even more so that formal classroom instruction appears to be yielding way to the rather informal, causal and conversational Internet communication structure.

## 7 RECOMMENDATION

We recommend that authorities in Nigeria, and indeed, in other emerging nations of Africa pay adequate attention to creating enabling environments for the development of necessary facilities for the enhancement of the Internet in our sub-region.

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