New Generation, New media and Digital Divide: Assessing global digital divide through ownership, literacy, access and usage of Internet and Social media by young people in Nigeria

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Abstract

Before the turn of the century, online media was characterized by e-commerce and the limited opportunities to interact were mainly through emails. The birth of the new millennium witnessed the integration of the internet into virtually every aspect of education, commerce and even governance and civic activity in developed countries, making the internet, a critical element in creating wealth worldwide. Today the internet has become a social mechanism, parading blogs, podcasts and social networks and these appear to be inextricably woven into young people's lives. Studies from 2000 to 2003 indicate that more than half of the 269 million new internet users were young people. Seven years down the road a much larger number of young people are using social media technology through websites such as Facebook, Myspace, Bebo, Youtube, Wikis, Twitter and many more to source and disseminate information, stay in touch with their friends, search for music videos, customize games and experiment with digital media production. This fact was not overlooked by the Barrack Obama and John McCain campaigns during the 2008 United States presidential elections when they maintained presences in some of those websites, exploiting their interactive nature to

mobilize young voters. Most studies about youth participation in the social media reveal the overwhelming existence of the millennial or "digital natives" especially in developed countries, a situation that is believed to have created a digital divide between the developed and developing nations, thus precipitating tags such as "information poor and information advantaged" nations and "Haves" and "Have nots". In spite of the World Internet Usage and Population Statistics 2010, which states that only 23,982,200 million of the nearly 150 million persons making up Nigeria's population are internet users (http://www.internetworldstats.com), information from traditional media and visits to social media websites reveal heavy usage of social media by Nigerian youths. This 2010 research is a follow up of a study conducted in 2009 by this researcher, which sought to find the extent of digital divide, through the assessment of new media participation among Nigerian youths, in the context of ownership of personal computers, literacy, internet access and usage of social media. Findings of that study revealed significant global divide. Primary data generated, along with secondary data which was extracted from the latest 2010 Pew Internet Project report of the survey of 800 teens 12 – 17 years and 2,253 adults of 18 years and above in the US were used to create a database and a platform for making a comparative analysis of youths participation in the new media in both the developed and developing countries. Results of this new study however reveal a significant bridging of the divide as young people in Nigeria are found to be overwhelmingly adopting the new media. Suggestions as to how to further bridge the digital divide are offered.

Introduction

Before the turn of the century, online media was characterized by e-commerce, and the limited opportunities to interact were mainly through emails. It created a host of new businesses and an army of new millionaires. The birth of the new millennium witnessed the integration of the internet into virtually every aspect of education, commerce and even governance and civic activity in developed countries, making the internet, a critical element in creating wealth worldwide. As Cairncross (2000) opines, never has any new invention, shot from obscurity to global fame. In 1990, only a few academics had heard of the internet even in 1997, when President Jacques Chirac of France opened the country's national library, and was shown a computer mousse, he gazed at the curiosity in wonder. Yet by the turn of the century, about 385 million people around the world had acquired a new way to communicate and a new global source of information and many of the astonishing torrents of ideas and business plans on the internet have transformed commerce and communications. Consequently, the internet has today become a social mechanism, parading blogs, podcasts and social networks and these appear to be inextricably woven into young people's lives. As Mazrui sums it up, the sun never sets on the slopes of the internet (2008, p. 99).

Studies from 2000 to 2003 indicate that more than half of the 269 million new internet users were young people. Seven years after, a much

larger number of young people are using social media technology through websites such as Facebook, Myspace, Bebo, Youtube, Wikis, Twitter and many more to source and disseminate information, stay in touch with their friends, search for music videos, customize games and experiment with digital media production, a fact not overlooked during the 2008 US presidential elections. Both President Obama and his Republican contender McCain had maintained presences in some of those websites, using their interactive nature to mobilize young voters.

Statement of the problem

Most studies about youth participation in the social media reveal the existence of digital divide between the developed and developing nations, thus culminating in such terms as "information poor and information advantaged" nations and as Joseph posits, Information Communication Technology has barely taken foothold in most developing countries. He argues that computer illiteracy and the lack of access to ICT which make up part of the digital divide are widely recognized as an increasingly powerful obstacle to political and civic development in these countries (P. 193).

In spite of these arguments by various scholars, information from some traditional media in Nigeria and visits to social media websites reveal the heavy presence and participation of Nigerian youths.

This study therefore examines the extent of digital divide between the developed and developing nations, in the context of ownership of personal computers, literacy, internet access and usage of social media. It does this as a follow up of an earlier study.

Objectives

- To determine if there is an upward shift in new media participation by young people in developing countries.
- To examine the degree of digital divide and if there is a bridging of same revealed in the first study.

The following Research Questions guided the study

RQ1. What is the computer literacy level of UNILAG students?

RQ2. What percentage of University of Lagos students own personal/laptop computers?

RQ3.What is the level of internet access and usage among UNILAG students

RQ4. What is the degree of social media participation among University of Lagos students?

RQ.5. To what extent is there a digital divide between young people in developing and developed countries?

RQ6. What proportion of University of Lagos students are digital natives?

Definition of key Terms

Internet Access

This is the connection which allows you to get on the Internet through an Internet Service Provider (ISP), of your choice. The type of connection chosen is based on a number of different factors, including cost and the communications system.

Computer Literacy

This is the ability to operate a computer and to understand the language used in working with a specific system or systems.

Ownership

This refers to the state of being an owner or having exclusive right of possession.

Social Media

Social media includes the various online technology tools that enable people to communicate easily via the internet to share information and resources. Social media can include text, audio, video, images, podcasts, and other multimedia communications.

New Media

New media is a term which encompasses interactive digital media, computerized, or networked information and communication technologies, such as the Internet, as opposed to traditional media such as print and television.

Millennial Generation

This is a term used to refer to the generation, born from 1980 onward and brought up using digital technology and mass media.

Digital native

A digital native is a person for whom digital technologies already existed when they were born, and hence has grown up with digital technology.

Global digital divide

This is a term used to describe the differences or gaps in opportunity to access the Internet and the information, educational and business opportunities tied to this access, between developed and developing countries. Unlike the traditional notion of the "digital divide" between social classes, the "global digital divide" is essentially a geographical division.

Literature Review

About 40 years ago Marshall McLuhan introduced the term new media to connote new technology, and today scholars such as McQuail (2005) define new media as Information Communication technology ICT. According to McQuail, the ICT, with their associated social contexts, bring together three elements: technological artifacts and devices, activities, practices and uses; and social arrangements and organizations that form around the devices and practices (p.38). ICT can also be defined as the new media and applications that on various grounds enter the sphere of mass communication, and may include the collective ensemble of activities that fall under the heading "internet", especially on the more public uses, including online news, advertising, broadcasting applications including downloading music, forums and discussion activities, World Wide Web, information searches and certain community forming potentials, such as social networking (McQuail, 2005, p. 136).

The internet is known to be the fastest growing communication medium today. Where radio took 38 years and the personal computer 16 years to touch the lives of some 50 million people, it took the internet less than 4 years to reach the same number of people. In a world of interactive media, the personal computer and the internet have become central to the lives of young people. According to UNFPA Report, from 2000- 2003, more than half of the 269 million new internet users were between the

ages of 15- 24, with majority of them living in urban areas. Another study, conducted in 2005, on "Living and learning with New Media" findings reveal that young people's participation in the new media is giving them the technological skills and literacy they need to succeed in the contemporary world. They are learning how to get along with others, how to manage a public identity, how to create a homepage, etc (http://digitalyouth.ischool.berkeley.edu) . Again, key findings in another study of "children and the changing media environment in Europe" reveal a consistent pattern of media access and ownership, which cut across national differences. (http://www.fathom.com).

In the western countries, a new generation of young people has emerged- the digital natives (http://www.pewinternet.org) or the millennial generation. A Digital Native, according to APLINK, is someone who is both born after about 1980 and who uses digital technologies in certain advanced ways. It appears that most children in developed economies like the United States and Europe are Digital Natives. This group has been immersed in technology, specifically the internet for most of their lives. However, Professor Urs Gasser of the University of St. Gallen in Switzerland argues that there is an emerging population of Digital Natives around the world who together could form a global culture joined by digital networks and how they use them http://aplink.wordpress.com Web 2.0 which refers to social media technology has been the online buzzword for the past few years. It is used every day by millions of young people through various sites. The

term which gets thrown around a lot these days essentially incorporates the online technology and methods through which people can share content, personal opinions, swap different perspectives and insights into world issues and generally discuss the evolution of media itself. (http://www.bigmouthmedia.com). Social media formats come in different forms, such as text, audio and video and the most popular types of social media websites are huge at the moment and include;

1. Social networking websites that allow you to create a personal profile about yourself, then chat, discuss and share information with others such as friends and family. Prime examples of these are Face book, MySpace, Bebo, etc.
2. Wikis are websites that allow you to create, edit and share information about a subject or topic, e.g. Wikipedia.
3. Video sharing sites allow you to upload and share your personal videos with the rest of the web community. A perfect example of this is the YouTube.
4. Photo sharing websites allow users to upload pictures and images to a personal account which can then be viewed by web users the world over. Flickr is an example of this.
5. News aggregation provides a list of latest news stories published by users from a range of different websites; Digo is one of the biggest news aggregators.

6. Social Bookmarking sites allow users to publicly bookmark web pages they find valuable in order to share them with other internet users.
7. Online gaming is often based around communities. World of War craft is an example of online gaming.
8. Presence apps allow users to post micro blog-like posts to announce what they are currently doing. Twitter is a good example of this.

There are many more types of social media sites available on the internet and because the social media front is moving so fast, even if it were possible to list them all here, it would be out of date by the time you read this article, as new and innovative social media sites spring up nearly every day. Young people depend on social media as a way to disseminate information. 93% of young people are either on Face book or My Space (http://www.pewinternet.org). Many young people are addicted to the internet, spending at least 6 hours a day in front of the computer, checking their emails, perusing social networking sites, reading messages or posting updates, searching for music videos on You Tube, Gala online, a role-playing site where members fashion alternate identities as cutesy cartoon characters, or Quizilla.com or Fanfiction.net, where they read and comment on stories written by other users and based on books, television shows and movies. The new media are inextricably woven into young people's lives. According to Rideout, a set

of young people told a reporter that all of them use My Space and instant messaging to stay in touch with a dozen or two of their closest friends every evening. Some of them claim to be addicted to, and cannot live without social media. They also use new media to explore romantic relationships. (http://www.kaiserfamilyfoundation.org).

Sturgill notes that one of the factors credited with energizing young voters is the social media. The Obama and McCain campaigns used social media to mobilize young voters, offering ideas for using Facebook , MySpace and other social media websites. While the Obama's profile had 2.7 million registered supporters, McCain's profile registered over 600,000 supporters. It is estimated that about 24 million Americans aged 18-29 voted in that election, an increase of over 2 million over the 2004 election, (p.8) and though it is difficult to measure there is an overwhelming belief that Obama's social media interaction was contributory to his success at the presidential elections.

One of the major issues surrounding ICT is the disparity regarding access to computers and the internet or digital divide between nations and groups. According to Wikipedia, "Hans Singer in 1970 introduced the concept of international technological dualism, by which he meant essentially unequal developments in the area of science and technology, between rich and poor countries". Today, this disparity in the utilization, expenditure, and availability of technology" on a worldwide scale is

known as the Global Digital Divide. Wikipedia, citing Pick & Azari, 2008, p. 92, note that the global digital divide involves "economic, educational, and social aspects" that influence the levels of information communication technology development in each country. It Cites the 2002 World Economic Forum report on the global digital divide which found that, "88% of all Internet users are from industrialized countries that comprise only 15% of the world's population" (http://wikipedia.en.org) Similarly, findings of a study conducted by Fathom reveal that the western countries lead the developing countries in both access and usage of the new media. For instance, in the industrialized countries, 76% of young people of age 18 - 29 have access to the internet from home. (http://www.fathom.com).

Citing Guillen, & Suarez, 2005, p. 681) Wikipedia notes that the "global digital divide" is distinguishable from the "digital divide", in that “Internet has developed unevenly throughout the world” causing some countries to fall behind in technology, education, labor, democracy, and tourism. Norris similarly posits that these divides are often symptoms of greater and more complex problems such as poverty and inequality in status; income and education associated with technological attainment. The poor and socially disadvantaged are excluded in the current ICT driven society, since they may not have access to the new ICTs and the opportunities they offer. They are consequently on the wrong side of the digital divide. Though Norris opines that developing countries, by reason

of factors such as economy, literacy, culture, non implementation of ICT policies, are believed to be trailing in the dynamic information society, Joseph (2008), argues that in Nigeria, the certainties of rural tradition is gradually giving way to urban life, with its opportunities and the collective identities of the people are shaped by and expressed through music, dance, fashion and the media.

Theoretical Framework

This study was anchored on the Social Shaping of Technology, Technological Determinism and Diffusion of Innovation theories. Technological Determinism generally suggests that technology automatically have predictable impacts on society (Zhao, p.13) and this is captured in McLuhan's submission that:

Electric media… abolish the spatial dimension, rather than enlarge it. By electricity, we everywhere resume person-to-person relations as if on the smallest village scale. It is a relation in depth, and without delegation of functions or powers. On a planet reduced to village size by new media, cities themselves appear quaint and odd, like archaic forms already overlaid with new patterns of culture…… Unlike previous environmental changes, the electric media constitute a total and near instantaneous transformation of culture, values and attitudes.., and sealed the entire human family into a single global tribe. (McLuhan, 1964)

The transformational nature of the new media cannot be disputed as the internet has practically taken over some societal conventional norms.

People are talking, working, shopping, getting their news and schooling over the internet, rather than visit the stores to purchase books, phones, cars or banks to pay their bills or purchase a newspaper to read the day's news. Indeed, nothing remains untouched by this new media technology. However, the weakness of this theory lies in its inability to answer the questions raised by the unequal rates of diffusion and adoption of the new media. McLuhan assumes that the entire population of the globe is plugged into communications technology to the same extent, and that we can hear of any single event anytime we choose. This we know is not feasible due to socioeconomic factors such as differences in income levels, literacy levels, technological skills, rates of development and adoption of innovations and government shaping.

It was these concerns that generated criticisms from various quarters and McKenzie and Wajcman in their 1985 book titled "The Social Shaping of Technology" proposed the Social Shaping of Technology Theory which addresses the issue of social impact of technology (Zhao, 2005, p.7). Whereas Technological Determinism sees information technology as the main force which shapes society, the Social Shaping of Technology theory posits that society and social values shape the way in which information technology affects people's lives. Although Social Determinism cannot deny that technology has a huge effect on society, it focuses more on the social forces behind the development and usage of technology. It examines the interaction between technology and society

and the way in which technology is consumed. Here, Social Shaping of Technology can be aligned with evolution which is considered a gradual incremental change, unlike Technological Determinism which is on the side of revolution. Revolution connotes a sudden, dramatic change and a break with the past, but this cannot be said to be the case since the rate of diffusion and adoption of technology varies from individual to individual and from society to society. Socioeconomic factors such as income level, literacy level, culture and sometimes religion determine ownership, access and operability of technology. Disparities in these create terms such as “digital divide”, “information advantaged and information poor” and “haves and have nots” and this is underscored by the findings of studies on ownership, access and usage patterns of the computer and internet by people in the industrialized nations. Even within countries, the story is no different, as the existence of the haves and the have not’s, also occasioned by differences in income and educational levels, creates a social divide. Thus some are able to purchase personal computers, subscribe to the internet and also posses the technological abilities to operate the computer and browse the internet, while others are not. Thus developing countries, by reason of factors such as economy, literacy, culture, non implementation of ICT policies, are believed to be trailing in the dynamic information society. In Nigeria, access to the internet varies significantly by geographic region, social class and place of residence. Youths living in cities are more likely

to have access to the internet than those living in rural areas as the rural areas are plagued with poverty, lack of formal education and dearth of basic infrastructures, such as electricity to power the computers. The desire of technology designers to reach an entire population is often not achieved for reason of these social forces, thus a technology may not necessarily have a predetermined impact on an individual's life. Doyle argues that when a technology is produced, it becomes the task of the individual to customize the product to suit his needs or lifestyle. "The consumer is the processor, the turner of things into social and cultural values". (http://www.geocites.com). People use the internet for different reasons, to suit their needs or lifestyles. While some young people may use it for academic research, others may use it for sending and receiving emails or for social networking. They may also choose to use it for two or more of these purposes at different times or simultaneously, thus customizing it to suit their needs. In fact, one may easily say that the process never ends, for as people and their lives change, so does technology with which people interact. This is social shaping at its most individual level, where the designer has no control over the way the technology is used or to what end. Today, everywhere around us people are utilizing technology and indeed the internet in amazing ways. One such case is the last United States Presidential elections, where Obama's victory is widely attributed to his ability to use social media tools to mobilize youths and carry out his message of change.

(http://www.about.com). It is difficult to imagine that a designer at the beginning of the home computer era would have envisaged this high level appropriation by the consumer, and since the individual/s are integral parts of society, this demonstrates the evolving nature of social shaping of technology, where everyone who has hand, act or part in technology, serves to shape it.

Methodology

Participants and Procedure

The survey method was considered appropriate for this study and the research instrument used was a 30-item questionnaire, administered to elicit responses from a sample of 300 respondents. The Multi-stage cluster sampling method was employed and while the population consisted of all the young people in Nigeria, the 35,000 students of the University of Lagos were purposively selected as the representative samples. The 18,000 students in the halls of residence were also purposively selected.

The systematic random sampling technique was then used to select a sample of 20 respondents from each of the 15 halls of residence, bringing the total sample size to 300 respondents.

The copies of questionnaire were administered by a total of 15 research assistants who are undergraduate students of the Department of Mass

Communication at the University of Lagos. Questionnaire copies were administered using the "wait and get" approach. However the assistants had to drop questionnaire copies for a few respondents who were indisposed to complete the instruments on the spot. In a few cases, they made several trips to collect the completed research instruments. This perhaps accounted for the 100% return rate.

In all a total of 155 men and 145 women fully completed the research instrument.

The US was selected as the representative of the developed countries. Due to the geographic distance, limited study time and inadequate financial resources among other constraints, data from the latest 2010 Pew Internet Project report of the survey of 800 teens 12 – 17 years and 2,253 adults of 18 years and above in the US was extracted and used as database and platform for making a comparative analysis of new media participation by young people in developed nations.

Results

The major findings of the study are presented in this chapter and are analyzed against the backdrop of the 6 research questions. Results of the demographic enquiries revealed that 114 respondents were between the ages of 15-20, 126 between the ages of 21-25, 21 between the ages of 26-30, 9 between the ages of 31-40, and 7 respondents were above 41. Of these, 24 of them were diploma students, 244 were undergraduates and 31 were post graduate students. Regarding family income, 9% of them

indicated a monthly income of less than 50,000, 15% a monthly income of 50,000, 24%- a monthly income of less than 200,000, 21%- a monthly income of less than 350,000, 21%- a monthly income of less than 500,000 and 2%- a monthly income of above 500,000 naira. The rest of the data are presented in order of the research questions.

RQ1. What is the computer literacy level of UNILAG students?

To determine the ICT literacy level among University of Lagos students, respondents were made to answer two questions; Are you computer literate?; and how old were you when you started using the computer?

Table 1: Showing percentage of computer literate persons

Response	Percentage
Yes	94.3
No	5.7
Total **n**	**100%** **300**

Table 2: Showing level of computer literacy

Range	Percentage
9 - 10	10
6 - 8	47.33
3- 5	37.67
1 - 2	5
Total **n**	**100%** **300**

The distribution of the questions and results are shown in tables 1, and 2. A total of 94.3% of the respondents said they are computer literate

while 5.7% answered in the negative. Similarly, 47.33% and 10% making a total of 53.33% fell within the upper range of computer literacy.

RQ2. What proportion of University of Lagos students own personal/laptop computers?

On the ownership of Desk top and laptop computers, respondents were also made to answer the questions; do you own a personal computer and do you own a laptop computer? The distribution of the questions and results are as shown in tables 3 and 4.

Table 3: Showing ownership of personal computers?

Response	Percentage
Yes	50.6
No	49.4
Total **n**	**100%** **300**

Table 4: Showing ownership of laptop computers?

Response	Percentage
Yes	48.9
No	51.1
Total **n**	**100%** **300**

Tables 3 and 4 show that while 50.6% of the respondents own personal computers, 48.9% own laptop computers

RQ3.What is the degree of internet and social media access and usage among University of Lagos students?

To determine the degree of access and usage of both the internet and social media, respondents answered three questions.

Table 5: Do you have internet access?

Response	Percentage
Yes	60.2
No	39.8
Total **n**	**100%** **300**

Table 6: How often do you visit the internet?

Response	Percentage
Daily	45.5
Twice weekly	25.3
Bi-weekly	14.6
Sometimes	4.5
Rarely	9.6
never	0.6
Total **n**	**100%** **300**

Table 7: How many hours do you spend surfing each time you visit the internet?

Response	Percentage
Over 10 hours	4.3
7-10 hours	3.6
4-6 hours	11.8
1-3 hours	80.3
Total **n**	**100%** **300**

The distribution of the questions and results are as shown in tables 5, 6 new media by respondents. While 60% of them have internet access, 46% of them use it daily and only 10% spend over 6 hours each time they visit the internet.

RQ4. What is the degree of social media participation by University of Lagos students?

To determine the degree of social media participation by Nigerian youths, a group of 7 questions were employed to elicit answers from respondents.

Table 8: What do you use the internet mostly for?

Response	Percentage
Social networking	36.4
Academic research	52.1
Receiving and sending emails	2.4
Exploring romantic relationships	1.7
Other	7.3
Total **n**	**100%** **300**

Table 9: Are you familiar with blogging?

Response	Percentage
Yes	41.5
No	58.5
Total **n**	**100%** **300**

Table 10: Are you familiar with podcasting?

Response	Percentage
Yes	34.6
No	65.4
Total **n**	**100%** **300**

Table 11: Are you familiar with video sharing?

Response	Percentage
Yes	61
No	39
Total **n**	**100%** **300**

Table 12: Are you familiar with photo sharing?

Response	Percentage
Yes	70.9
No	29.1
Total **n**	**100%** **300**

Table 13: Are you familiar with social book marking?

Response	Percentage
Yes	44.4
No	55.6
Total **n**	**100%** **300**

Table 14: Are you familiar with online gaming?

Response	Percentage
Yes	61.4
No	38.6
Total **n**	**100%** **300**

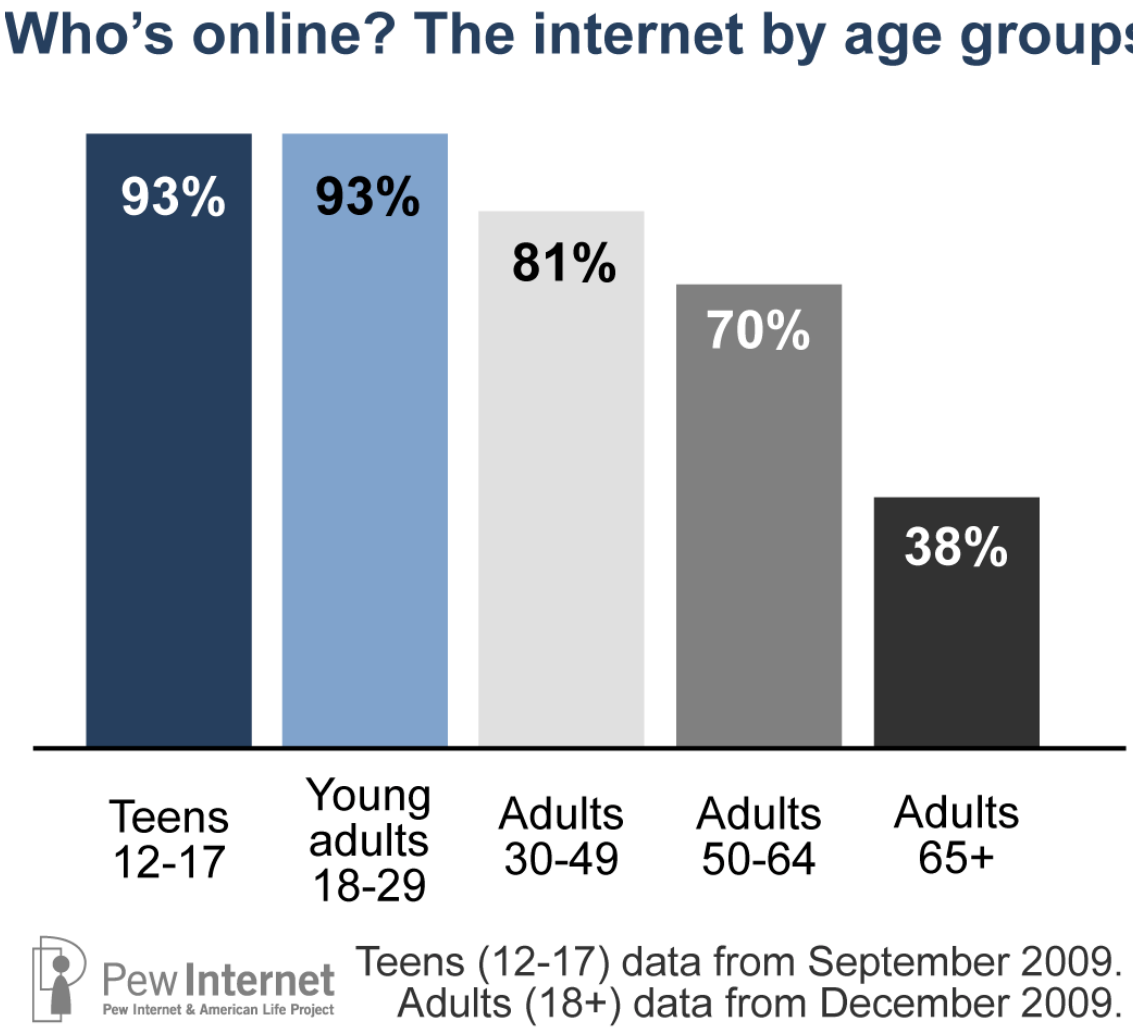
Table 7, shows that while 52% of respondents use the internet for academic research, 36% use it for social networking. However the data on tables 9 – 14 strongly suggest a high degree of social media familiarity and participation by respondents.

RQ.5. To what extent is there a global digital divide?

To find answer to research question 5, secondary data was used to compare with the primary data collected by the researcher. Data from the latest 2010 Pew Internet Project report of the survey of 800 teens 12 – 17 years and 2,253 adults of 18 years and above in the US was extracted and details are as follows:

Table 15: Internet usage by age

Age	Percentage
12 - 17	93
18 -29	93
30 - 49	81
50 - 64	70
65 +	38



RQ6. What is the percentage of millennial generation/digital natives among University of Lagos students?

Table 16: Distribution of respondents according to age

Age	Percentage
15 - 20	114(38%)
21 – 25 years	126(42%)
26 – 30 years	28(9.3%)
31 – 40 years	9(3%)
41 years and above	7(2.3%)

Table 17: Age when you started using computer

Response	F(Percentage)
4-8 years	25(8.8)
9-13 years	70(24.7)
14-16 years	106(37.5)
17-21 years	63(22.3)
22 +	19(6.7)
Total **n**	**100%** **300**

Tables 16 and 17 show a preponderance of digital natives/millennial generation. While 89% of the respondents were born before 1980, about 70% of them started using the computer before they were 16 years old.

Discussion of the Findings

The study is a follow up on a study conducted in February 2009 and presented at the Idowu Sobowale Conference on Media, Governance and Development in Africa, held in March 2009, at the Olabisi Onabajo University, Ago-Iwoye, Ogun State, Nigeria. Its major objective is to determine if there is a shift in the level of digital divide between the

developed and developing countries. Again, students of the University of Lagos students are surveyed in the context of ownership of personal and laptop computers, literacy level, internet access and usage of social media. Consider the following major findings in tables 18, 19 and 20:

Table 18: Showing shift in ownership, literacy, access and usage of new media among young people in Nigeria, between 2009-2010

Nigeria	**2009**	**2010**	**Shift in divide**
Ownership of personal computers	39%	50.6%	11.6%
Ownership of laptop computers	9%	48.9%	39.1%
Level of computer literacy	75%	94.3%	19.3%
Level of internet access	47%	60.2%	13.2%
Internet access from home	N/A	34.6%	N/A
Social media participation	16%	52.3%	36.3
Facebook participation	16%	69%	53%
Users spending 6hours on internet	8%	10%	2%
Millennial generation	60%	70%	10%

Table 19: Assessing the level of digital divide between the developed and developing nations using the USA and Nigeria as study groups

Level of new media participation in 2010	USA	Nigeria	Digital divide
Ownership of personal computers	53%	50.6%	2.4%
Ownership of laptop computers	66%	48.9%	17.1%
Level of computer literacy	93%	94.3%	1.3%
Level of internet access	76%	60.2%	15.8%
Internet access from home	76%	34.6%	41.4%
Social media participation	72%	52.3%	19.7%
Facebook participation	73%	69%	4%
Users spending 6hours on internet	75%	10%	2%
Millennial generation	95%	70%	25%

Table 20: Assessing the level of digital divide between the developed and developing nations using the USA and Nigeria as study groups

Level of new media participation in 2009	USA	Nigeria	Digital divide
Ownership of personal computers	75%	39%	36%
Ownership of laptop computers	29%	9%	20%
Level of computer literacy	92%	75%	17%
Level of internet access	81%	47%	34%
Internet access from home	62%	N/A	N/A
Social media participation	60%	16%	44%
Facebook participation	60%	16%	44%
Users spending 6hours on internet	60%	12%	48%

Millennial generation	95%	50%	45%

SOURCE: Pew Internet & American Life Project/Kaiser family foundation/ data from this study

The degree of digital divide was determined by using both primary and secondary data. This was made possible by situating it within comparable data drawn from a survey conducted between August 18 and September 14, 2009, of 2,253 adults of the age 18 and above and 800 teens of the age of 12 – 17years.

The results are shown in tables 18 and 19 and 20 and reveal an increase in ownership, literacy, access and usage of the internet and social media by young people in Nigeria. Similarly comparisons between ownership, access, literacy and usage among young people in the United States of America and young people in Nigeria reveal a significant bridge in digital divide. Most disparities are in tens except for the degree of internet access from home which is in the forties. This is a remarkable shift from 2009, when most of the disparities were in thirties and sometimes in the upper forties. While this is a welcome development, results of this study may not easily be generalized to all young people in developing countries. This is because computer ownership, literacy, internet access and operability increase with rising educational attainment, income and geographical location. Access to the internet varies significantly by geographic region, social class and place of residence. Youths living in cities such as Lagos are more likely to have access to the media and

indeed the internet, than those living in rural areas. Nonetheless, there is much to celebrate and to build upon. The future of many societies around the world depends in part on how we can come to understand this global phenomenon called new media and do something about it.

Conclusion

Results of this study reveal a nascent pattern as an increase in ownership, literacy, access and usage of the internet and social media by young people in Nigeria is evident. Similarly comparisons between ownership, access, literacy and usage among young people in the United States of America and young people in Nigeria reveal a significant bridge in digital divide. Most disparities are in tens except for the degree of internet access from home which is in the forties. This is a remarkable shift from 2009, when most of the disparities were in thirties and sometimes in the upper forties. All these suggest a bridging of the digital divide.

However, given the fact that the samples used in this study are all literate, it is difficult to draw generalizations at this time. The population of this study comprises students of the University of Lagos, with most respondents likely to come from middle class backgrounds, and

consequently may not be true representations of the entire youth population of Nigeria and indeed the developing world. Furthermore, the University of Lagos is located in Nigeria's most industrialized and developed city (Lagos- often called the New York city of Nigeria) with easier access to ICTs than other cities in the country. It is logical therefore, to assume that a study of the entire youth population (including the rural population),while not revealing the degree of digital divide claimed by industrialized nations is likely to reveal something greater than what the findings of this research show. It is consequently hoped that this study will stimulate more detailed research on this very important subject. However, the fact that both the 2009 and 2010 studies were conducted on the University of Lagos students and with remarkable differences in the results is an indication of a bridging of the digital divide.

Recommendations

Though developing nations appear to be bridging the digital divide at a telegraphic rate, there is need for more work in order to fill the gaps so evident among the socioeconomic classes in the Nigerian society, as this is perhaps the only way to bridge the global digital divide. The following recommendations are therefore offered.

1. Grassroots oriented development programs aimed at closing the gaps, should be planned and implemented. Examples of such programs

include the computer literacy program in India where computers are buried in the walls of public buildings in rural areas and made accessible to less advantaged children and adults alike (Amobi, 2009). Another such program founded in 1996, was sponsored by the city of Boston and called the Boston Digital Divide Foundation. This program especially concentrates on school children and their parents, helping to make both equally knowledgeable about computers, using application programs, and navigating the internet (Wikipedia, 2010).

2. The use of some of the participatory approaches of development communication, such as Community Broadcasting, will go a long way in bridging the literacy gap, as media will be more accessible to rural dwellers who will take advantage of programs such as educational broadcasting, to increase their literacy levels. Similarly, the introduction of practical computer literacy programs in primary and secondary schools all over the country will increase their technical skills.

3. The supply of web-enabled laptops to the millennial generation or digital natives will be a big kick-start to the next phase of global transformation wrought by new information technologies and how they are used. Projects like "One Laptop per Child", in which the OLPC XO-I, an inexpensive laptop computer intended to be distributed to children in developing countries around the world should be exploited (Wikipedia, 2010). The key, though, is not just to put interconnected hardware in the hands of young people, wherever

they may be. It's just as essential that literacy of various kinds is focused on and the training that goes along with learning how to navigate this information environment.

4. Internet connectivity at all levels of Nigerian schools will go a long way in correcting the global and social divide.
5. Providing schools with computers and internet connectivity is however not sufficient to close the digital divide. Teachers must receive the appropriate training in order to use technology effectively and to increase student learning.
6. Although education could be used to as a tool to close the "digital gap", closing this gap will not completely close the achievement gap between students from the upper and lower socioeconomic status SES backgrounds. Consequently, there should be a dedicated effort on the part of government to make these technologies accessible to most by formulating policies and programs aimed at bringing down the costs of computers and internet subscription and by creating an enabling environment for job creation and employment opportunities. Needless to say that countries with a wide availability of internet access can advance the economies of that country on a local and global scale as in today's society, jobs and education are directly related to the internet, in that the advantages that come from the internet are so significant that neglecting them would leave an organization vulnerable in a changing world.

7. Parents and guardians should facilitate and encourage internet exposure for their children and wards, as this will enable them develop a public sphere of their own, acquire a sense of self, personal competence and a network of peers, which can serve as sources of social capital for a safe and successful transition to adulthood.
8. The transfer of goal-setting, decision making and choice determining processes into the hands of the disadvantaged users in order that they fit internet into their daily lives in ways that they themselves consider to be meaningful.
9. International cooperation between governments aimed at dealing with the global digital divide. An example of this cooperative attempt is the United States Agency for International Development USAID funded state-of –the-art equipment for Egyptian education and which over the years has increased computer literacy and knowledge about computers among Egyptians (Wikipedia, 2010).
10. Needless to say that an enabling environment with appropriate infrastructures, such as uninterrupted power supply will go a long way in ensuring that these technologies, when acquired can be put to effective use, for of what use will purchasing a computer, or subscribing to the internet be, if there is no electricity to power them?

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