

# **Old problem, New Strategies: Internet as a Tool for Research in Africa**

Kibet A. Ng'etich

Department of Sociology and Anthropology

Egerton University, Kenya

Email: [kgetich@hotmail.com](mailto:kgetich@hotmail.com)

## **Abstract**

Until recently, the main source of research information in Africa has been print media-books, journals and newspapers. Thus researchers in Africa have traditionally depended on conventional libraries, archives and documentation centres where they physically access needed information. However, the advent of Information Communication Technologies (ICTs) is tremendously changing the way research is done. The Internet is becoming part and parcel of the process of doing research and disseminating research findings. Internet is revolutionising not only the way we conduct research, but also how we share or disseminate the research findings.

This paper explores Internet as an academic research tool, which African researchers must maximally utilise. The paper contends that Internet has the capacity to leapfrog Africa into the information age and narrow the information gap, which hitherto exist. It examines the ways in which researcher can use the Internet as a research tool particularly in social science research. What makes Internet a fundamental aspect of academic research is that it has some bearing on almost all stages of the research process (from identification of research problem, through literature review to data analysis and dissemination).

The World Wide Web (WWW) is a whole world in itself with enormous research resources, which African researchers could utilise. These include access to electronic databases and electronic publications such as electronic books and journals (e-books, e-journals, e-newspapers). The WWW is the source and potential destination of research information in that during research, one can access valuable data from the Internet and disseminate the research findings in the WWW.

The paper concludes that as more information become digitalised, and electronically available (online), the Internet is not only revolutionising research but also publishing. The Internet provides a window of opportunity for African scholars overcome problems of lack of access to current publications that have for a long time undermined African scholarship. Internet affords African scholars the opportunity to break the chain of dependence. Failure to take the opportunities might result in the Internet technology reinforcing the existing dependence on western publications electronically as well. Thus, basic research methods courses in African Universities should therefore include an introduction to Internet use for research purposes.

## **Introduction**

Since time immemorial, scholars wrestle with the problem of research as the basis for knowledge generation. While the old endeavour to pursue knowledge through research remain central to scholarship, how research is carried out has been constantly changing over time. Since the advent of writing, Internet is perhaps one of the most revolutionary developments with profound impact on research process and dissemination of information<sup>1</sup>.

Traditionally, learning materials were in the form of hard copies (in paper form specifically books, journals, reports etc). Although this form was instrumental in the development of knowledge production and distribution since the advent of writing, it had some limitations, which made access by African researchers difficult. The advent of Internet heralded emergence of new form of learning material-the soft form. The greatest advantage of this form is the dispersal of knowledge in the shortest time and minimal costs through out the world via a network of computers.

In spite of recent technological advances, African researchers continue to depend on traditional ways of doing research. The dependency on traditional media partly contributes to the low level of research output in Africa. Yet socio-economic and technological changes ushered in by globalization demand that researchers devise new ways of addressing emerging research challenges.

This paper focuses on the central role Internet play in social science researcher and highlights the opportunities and challenges it presents for scholarship. It first explores the status of internet connectivity in Africa, Second, examine the role of Internet as a tool for research, medium of communication and arena of electronic publishing, and third, the contribution of Internet to development of scholarship in Africa.

---

<sup>1</sup> Internet simply means Network of Networks

## **Internet in Africa**

More than 90% of Internet hosts are in developed countries that are home to only 16% of the world's population (Petrazzini and Kabati 1999). The whole of Africa accounts for less than two percent of Internet activity in the world (Dickinson 1999). With the number of Internet hosts and users in the West increasing at a higher rate than it does in Africa, the prospect of Africa catching up with the West in Internet technology appear bleak. The growing information gap (the so called information divide) between Africa and the West as evidence by the skewed distribution of Internet hosts in favour of the West clearly indicates that the threat of Africa being further marginalised, yet again, in the digital age is indeed real.

## **Researching Between Off-line and On-line worlds**

With the advent of Internet, researchers have now opportunity to work offline or online via Internet. Academic researchers have studied the Internet from a number of perspectives and methodologies. To name but a few, there have been ethnographic accounts of virtual places (Baym 1992, Myers 1987, Reid 1995), comparison of face to face with electronic communications (Dubrovsky *et. al.* 1991), electronic surveys (Park and Floyd 1996, Boyer *et al* 2001), conducting on-line focus groups (Gaiser 1997), Email Interviews (Murray and Sixsmith 1998) gender dimension (Dannet 1996) as well as cultural and ethnic dimensions (Sudweeks *et al* 1997).

There is also increasing focus on cyberspace where cultural anthropologists and geographers study the social, economic, cultural, and religious activities of online communities (Mizrach 1999, Paccagnella 1997, Schwimmer (1996)). Cyberspace constitute a wonderful example of how people can build personal relationships and social norms that are absolutely real and meaningful even in the absence of physical, touchable matter (Paccagnella 1997). Consequently, sociologists and anthropologists are increasingly studying social worlds built by people online. The patterns of relationships, roles, norms, languages, groups and institutions developed online have come to be widely referred to as virtual communities<sup>2</sup>. Although for a long time research in

---

<sup>2</sup> The term virtual communities still problematic and often interchangeably used with online communities

Africa remained at offline level, it is now possible for African researchers to also participate in online research activities.

### **Internet as a Tool and Field for Research**

As a research tool and field of research, the Internet provides the means and ends of research respectively. As a tool of research, the Internet provides the means of carrying out research online by acting as the main vehicle for exchanging information and publishing in the World Wide Web (WWW). As field of research, the Internet becomes the end or object of research where scholars study the online communities. As a field of research, Internet is a place of doing research where scholars explore different aspects of virtual communities. These include studies of Internet Relay Chats, Culture, ethnicity and other social structures created by the Internet. Nowadays, scholarly discussions and exchange of information take place primarily via Internet either as relay chats, electronic mails or bulletin boards. Research may be carried out via Internet on phenomena in the Web or on real phenomena.

### **Internet as a Medium of Communication**

Internet technology provides direct communication that makes every participant receiver and sender thereby enabling the exchange of data. It acts as a medium for exchange of information and ideas among scholars and researchers. As a means of communication, the Internet opens up the mode of interaction that is more efficient and quicker than traditional modes of communication where researchers exchange materials by post.

In Africa, where for years state censorship had curtailed academic freedom (Mamdani and Diouf 1993), Internet technology provides the means to circumvent most of the constraints to academic freedom. This is because the Internet technology disregards geographical boundaries and provides the possibility to circumvent censorship of scholarly publications in print media. The Internet is not subject to the rigid control governments often applied to the print publications. For example, some USENET groups engage in academic discourse with individuals from different countries and on sensitive issues, which would not be given any chance in the print media. Thus, the Internet has liberalising effect, enabling African scholars and researchers to overcome the limitations of the traditional print media and censorship.

## **Internet as a Means for Disseminating in Information (Publishing Arena)**

The need to communicate knowledge produced in African institutions of higher learning raises the question of a dissemination channel (Adebowale 2001: 97). The Internet builds on the traditional print publication to provide alternative, sometimes concurrent, avenue for disseminating knowledge through electronic publishing.

The Internet provides a platform for individual researchers and research institutions to present their ideas and research results in the World Wide Web (WWW). Thus, the Web provides alternative publishing platform for material in print media as well as other alternative contributions, which could not find a place in the print media. The WWW goes beyond providing electronic versions of what is available in print. It may include other contributions available only in electronic form.

Through electronic publishing particularly in the Web, African scholars and researchers have opportunity to present their ideas and research results to the world community and at the same time access via Internet scholarly contributions from outside Africa. Likewise, researchers from outside Africa have opportunity to recognise and access work produced by Africans, which may have in the past been ignored due to the North-South information divide.

In essence, the 'global village' forum created by the Internet enables researchers to look beyond their usual environment (may it be national or disciplinary) and acknowledge the value of publications produced elsewhere. Thus, Internet as a research tool liberates scholars and researchers constrained by social, legal, political, economic, and geographical constraints associated with traditional print media.

The WWW is a research tool that allows researchers to find out about nearly any topic of interest. Many researchers find the Internet handy in keeping abreast with developments in particular topics. The search engines such as Googles, Lycos, Yahoo, Hotmail, Hotbot, etc make the search for a wide range of issues in the WWW possible. Researchers need the Internet for literature search, data collection, data processing and analyses as well as dissemination of research findings or any other scholarly contribution.

Internet services often used for research purposes include Gopher, File Transfer Protocol (FTP), Mailing Lists, Newsgroups, Electronic Mails and World Wide Web (WWW). The WWW or simply the web is probably the most advanced Internet service. It makes possible to use the www but also e-mail, gopher, FTP, and newsgroups.

Electronic publishing is the backbone of Internet research. Internet research depends on electronic availability of scholarly materials. Thus Internet acts as the link between published material online and the researchers who are producers and consumers of the publications. Through the Internet, researchers disseminated their works as well as access the works of others and communicated with one another. While acknowledging that the Internet is multipurpose in the sense that its use is almost infinite, educational use of this technology needs to be promoted in Africa.

In the recent past, various initiatives to provide access to electronic publications in Africa have been started. For example African Journals OnLine (AJOL), which by June 2004 had 185 titles from 21 countries (INASP 2004) and the African Virtual University (AVU) project which offer distance-learning courses via Internet as well as electronic library services. These are examples of the power of modern information technologies to increase access to desperately needed educational resources in Africa (Oshikoya and Hussain 1998:13).

Elsewhere, outside Africa, initiatives are underway to overcome deprivation of access to the latest publications through optimal use of Internet technologies. Some examples include UGC-Infonet project of India (Murphy et al 2004) and virtual library for social sciences started by Latin American Council of Social Sciences (CLACSO), which as at 2004 had provided access to more than 4,000 full text books, journals and papers and papers (Babini 2004). Since increasing amount of scholarly work are becoming digitalized and available online, it imperative that utilization of Internet for research is taken seriously.

## **Towards Virtual Libraries and WWW: Implications for Research**

It is no secret that libraries in Africa are poorly stocked with current materials (journals and books). Even where books are available, they are often difficult to access due to poor records management systems, most of which are archaic and often not up to date. Yet many African researchers still depend largely on conventional information sources, particularly in print form for research.

Currently, access to social science publications in Africa has been constrained by numerous factors, which include: first, poorly stocked libraries; second, excessive cost of postal services, which make inter-library lending and sharing of resources ineffective and inefficient; third, high cost of international journals and books coupled with low funding levels for libraries and universities in general; fourth, poor and inadequate technology and, fifth, low technological literacy, especially in information technology. Consequently, Africa is not only deeply in book famine<sup>3</sup>, but is at the throes of a digital famine. For Africa, a combination of book and digital famine portends the worst information famine. The Internet has the potential to solve these problems through electronic publishing and shared virtual libraries.

Internet use for research and academic purposes which, range from carrying out research to disseminating the research findings, afford the opportunities for Africa to leapfrog decades of information poverty. In spite of the low technological inertia, African scholars need to use IT to leapfrog education, knowledge production and dissemination.

Internet is revolutionizing the publication, distribution, and access to social science information. Thus the Internet provides a unique opportunity to overcome most of the problems mentioned above through facilitation of publication and access to scholarly works from Africa and beyond.

Traditionally, the concept of library has been associated with providing information in print, video and audio video form. Recently, however, it has become clear that library functions are expanding and the traditional learning materials are either being supplemented by electronic publications or provided in electronic form concurrently.

Empirical research indicates increased migration of publications in to the Web (Bjork and Turk 2001). In view of the increasing evidence of how the Internet is overtaking paper media world wide, it is only logical that African scholars take seriously the electronic publishing. Without recourse to Internet technology, Africa, which has long been marginalized in access to print materials, also run the risk of being marginalized in access to electronic materials.

Internet could be used to pursue conventional educational and research agenda in Africa. Internet affords African researchers to opportunity to connect to other educational and research institutions in and outside Africa where they could access valuable relevant resources. This promotes the sharing of limited resources and cooperation among African researchers in and outside Africa. Internet promotes networking and exchange of ideas.

Internet is no longer a luxury, but an absolutely necessary tool for African social science researchers. It provides a window of opportunity to leapfrog the book famine and accelerate research production and dissemination. It holds more promise to Africa's quest for access to knowledge generated in and outside Africa at a relatively low cost. The role of Internet as a research tool has not been maximized in Africa.

In the globalized world order, Internet provides African researchers with opportunity to access enormous Internet resources in the form of electronic journals (e-journals), electronic books (e-books) and electronic newspapers (e-newspapers). In addition, there are wide ranges of academic materials available in databases in and outside Africa, which could be accessed freely through the Internet. But whether African researchers are making use of the online resources or not remain largely unknown. But judging from Internet connectivity and the low Internet use, it is most likely that few are aware of and use electronic publications.

Examination of references and bibliographies of recent published books and articles, reveal that most authors still depend on traditional print publications. The few citations of Internet URLs or webographies indicate low use of Internet sources in research.

---

<sup>3</sup> Including journals

Internet connectivity promotes research collaboration at individual and institutional level. It has the potential to overcome the existing problems of access to current periodicals and books, limited space, operational problems such delay in supply of materials in print form as well as distribution problems. Internet connectivity makes it increasingly possible for African researchers to carry out research electronically and remotely access e-materials in distant libraries.

For a long time, Africans have been mainly consumers of knowledge produced in the West. Lack of access to educational materials undermines Africa scholar's ability to compete with their western counterparts in knowledge production. Internet holds the key to redressing the imbalance in knowledge production and dissemination currently in favour of the west.

## **Conclusions**

African scholars need to exploit the potentials offered by the Internet tools, which allow efficient and cost effective ways of collecting, organising and exploring digital data as well as disseminating academic contributions. African researcher's contribution to the information world should not just measured in terms of its ability to utilize the rich Internet resources by accessing electronic publication via internet, but also by the ability to actively be involved in the developments of the Internet by publishing in the Web and researching on the virtual world.

Since conventional libraries in Africa are poorly stocked with relevant and current materials, it is imperative that African countries strive to facilitate wide use of Internet technology in teaching, research, sharing of information resource and electronic publishing. Without access to Internet, African scholars will not optimally contribute to electronic publishing let alone utilise virtual libraries, which have the potential to enhance knowledge production and dissemination in Africa.

It is therefore necessary to expand access to literature electronically through Internet. Internet can provide the means to access current international journals and books. Internet has become an effective tool for not only knowledge production but also knowledge dissemination through publication in the Web. It provides the means for exchange of information and sharing of valuable educational resources. African academics should take advantage the opportunities that

the Internet technology affords to harness distant academic resources. The Internet would make a positive difference in one's ability to learn and do research.

Africans should seize the opportunities afforded by the ICTs and the Internet in particular to break the chain of dependence on information generated by the Westerners. Failure to do so is likely to result in the ICTs reinforcing the information dependence. Given that the ICTs particularly, the Internet is controlled from the West, Africa run the risk of this technology reinforcing the existing dependence western publications. This means the dependence syndrome clearly manifested in the print publications will spill into the digital world. Thus, although there is hope in ICTs, there is also the danger of it reinforcing the existing information disparities.

Overall, Internet utilization increases research capacity, improve research output and dissemination of research findings through Web publishing. As tool and field of social science research, Internet need to be incorporated into social sciences methodology courses in Universities.

## **Reference**

Adebowale, S. 2001

The Scholarly Journal in the Production and Dissemination of Knowledge in Africa: Exploring Some Issues for the Future. In E. Maloka and E. Le Roux (eds), *Africa in the New Millennium*. Pretoria: Africa Institute of South Africa, pp 96-113

Babini, Dominique 2004

Sharing Experiences about Developing a Regional Social Science Virtual Library: The Latin America and Caribbean Social Sciences Virtual Library. In *International Network for the Availability of Scientific Publications*. No 26, June 2004

Bjork, B. and Z. Turk 2001

How Scientists Retrieve Publications: An Empirical Study of How the Internet is Overtaking Paper Media. *Journal of Electronic Publishing*, Vol 6, Issue 2

[www.press.umich.edu.edu/jep/06-02/bjork.html](http://www.press.umich.edu.edu/jep/06-02/bjork.html)

Boyer, K., J. Olson and E. Jackson 2001

Electronic Surveys: Advantages and Disadvantages Over Traditional Print Surveys. *Decision Line*, July 2001

Dickinson, G. 1999

The Internet Comes to Africa. *Canadian Medical Association Journal*. Vol. 160, p. 382

Gaiser, T. 1997

Conducting Online Focus Groups. *Social Science Computer Review*, Vol. 15, No. 2, pp 135-144

Mamdani, M. and M. Diouf 1993 (eds)

*Academic Freedom in Africa*. Dakar: CODESRIA

Mizrach, Steve 1999

Lost in Cyberspace: A Cultural Geography of Cyberspace.

[www.clas.ufl.edu/users/scholarly/lost-in-cyberspace.html](http://www.clas.ufl.edu/users/scholarly/lost-in-cyberspace.html)

Murphy, T., A. Kembhavi and V. Cholin 2004

UGC-Infonet: E-journals Consortium for Indian Universities. *In International Network for the Availability of Scientific Publications*. No. 26, June 2004, pp 1-3

Murray G. and J. Sixsmith 1998

E-Mail: A Qualitative Research Medium for Interviewing? *International Journal of Research Methodology*, Vol. 1, No 2, pp 103-121

Oshikoya, T. and M. Hussain 1998

Information Technology and the Challenge of Economic Development in Africa. *Economic Research Papers*, No 36, Research Division, African Development Bank, Abidjan

Paccagnella, Luciano 1997

Getting the Seats of Your Pants Dirty: Strategies for Ethnographic Research on Virtual Communities. *JCMC* 3 (1), June 1997

Petrazzini, B. and K. Mugo 1999

Internet in Developing Countries. *Communication of ACM* vol. 42, No. 6 pp 31-36

Schwimmer, B. 1996

Anthropology on the Internet. *Current Anthropology*. Vol. 37

Zurawski, Nils 1999

Ethnicity and Internet in Global Society.

[www.uni/muenster.de/soziologie/homepage/zurawski/inet96.html](http://www.uni/muenster.de/soziologie/homepage/zurawski/inet96.html)