

**This is an electronic reprint of the original article.
This reprint *may differ* from the original in pagination and typographic detail.**

Author(s): Touray, Almamy

Title: Internet abuse by university students: a neglected theme in Africa

Year: 2013

Version:

Please cite the original version:

Touray, A. (2013). Internet abuse by university students: a neglected theme in Africa. *International Journal on Information Technologies and Security*, 5(4), 3-12.

All material supplied via JYX is protected by copyright and other intellectual property rights, and duplication or sale of all or part of any of the repository collections is not permitted, except that material may be duplicated by you for your research use or educational purposes in electronic or print form. You must obtain permission for any other use. Electronic or print copies may not be offered, whether for sale or otherwise to anyone who is not an authorised user.

INTERNET ABUSE BY UNIVERSITY STUDENTS: A NEGLECTED THEME IN AFRICA

Almamy Touray

Department of Computer Science and Information Systems
University of Jyvaskyla
Email: almamy.2.touray@jyu.fi
Finland

Abstract: The purpose of this paper is to investigate potential Internet abuse by university students, an area lacking research focus in Africa. A case study was conducted at the University of The Gambia (UTG) in 2012. A total of 200 questionnaires were randomly administered to UTG students and 181 valid responses were available for analyses. The result indicates that about 18% of UTG students use the Internet for unspecified activities, demonstrating attributes that could reveal potential Internet abuse. Considering the negative implications of this phenomenon, African researchers cannot afford to neglect this theme.

Key words: Africa, Internet abuse, The Gambia, university students

1. INTRODUCTION

The Internet is important in human life [16] and its use has a great impact on students' academic career. It forms one of the largest knowledge depositories in the world [31]. The Internet is an inseparable part of today's educational system [34] and enables students to communicate in order to share ideas, knowledge, experiences and cultures [12]. According to these researchers, more students are relying on the Internet than other source areas for their academic needs. This finding is supported by other researchers [22, 8]. On the contrary, [11] claim that more students in their study use the Internet for entertainment while others argue it is used for communication and academic purposes [18, 34, 32].

However, previous studies conducted in Africa on students' use of the Internet seem to neglect the issue of Internet abuse. Therefore, this paper aims to initiate a continental research spectrum on the subject in order to bridge the research gap between Africa and other more widely studied regions. As the first research of its kind to be conducted in The Gambia, its findings will be equally vital to university administrator and policy makers in the country and beyond.

This paper utilizes the Uses and Gratifications (U&G) theory as its theoretical framework. The U&G theory explains that media do not do things to people; instead, people do things with media [20, 33]. In other words, this theory seeks to highlight how individuals use mass communication to gratify their needs [6]. Users of mass media actively use whatever the media can offer [7, 13]. These researchers stress that the Internet is one of the most dominant media which enables students to enjoy selecting the information that best suits their need. Of course, they may also use it for other reasons. This theory was used by [40] in an article entitled “Internet access and use among students of the University of Illorin”. This research aims to answer the following questions:

- RQ1: What do you use the Internet for?
- RQ2: How often do you use the Internet and where do you access it?
- RQ3: How much time do you spend on each Internet related activity per session?

The remainder of this paper is organized as follows: *Section two* covers the literature review and *Section three* presents the research methodology. *Section four* covers the data analysis and presentation of results while *Section five* concludes the paper.

2. LITERATURE REVIEW

The Internet is a very important and indispensable resource for students [35] and there is a strong relationship between its use and educational performance [37, 30, 10, 38]. Despite the potentials of the Internet, the aforementioned researchers argue that inappropriate use of this vital technology can significantly affect students’ academic performance. According to [36], Internet use is said to be inappropriate when it undermines one’s ability to fulfill his or her responsibilities. [9] stress the need to ask questions about Internet use as it exhibits warning signs to identify Internet addiction. Studies related to students’ use of Internet and their attitudes towards it have attracted great interest from other parts of the world, as well. In fact, this subject has been investigated by other researchers [12]. It is important to obtain relevant information on students’ educational use of the Internet [16]. Doing so would enable the identification of Internet abuse related issues. University students are considered to be high risk group for Internet addiction [44, 23]. It is a new disorder that was first described by psychologist Kimberly Young [45]. Internet addiction is one danger of Internet abuse in addition to online gambling, trafficking of pornographic materials, cybersex and cyberbullying [43, 29].

Africa has seen significant number of research focusing on university students’ use of the Internet. An earlier study by Luambano and Nawe [22] that was conducted at the University of Dar es Salaam in Tanzania revealed that most of the students who used the Internet did not do so for academic purposes. A study by Fatoki [17] contradicts this finding by stating that two thirds of the students in their

research used the Internet for academics. Similarly, [40] also highlighted that most students in Nigeria use the Internet for academic purposes. However, subsequent study on the continent strengthened the findings by Luambano and Nawe [22] that more university students use the Internet for communication [5]. Several research have been conducted in Africa related to Internet use in a university environment [1, 2, 3, 4, 5, 15, 17, 21, 24, 25, 26, 27, 28].

3. RESEARCH METHODOLOGY

This research employed case study design. Yin [42] defines this research design as an “empirical inquiry that investigates a contemporary phenomenon within a real-life context: when the boundaries between phenomenon and context are not clearly evident, and in which multiple sources of evidence are used.” The case study is a valuable method of research with distinctive characteristics that make it ideal for many types of investigation. Tellis [39] considers it as a triangulated research strategy which could be used for a single case or multiple cases.

3.1 CASE CONTEXT

The University of The Gambia is the only university in The Gambia. The country is the smallest mainland nation in Africa with a population of about 1.8 million people and an Internet user percentage of just 7.6 [41] – see Table 1. The Gambia experienced a real GDP growth average of about 6.5 percent a year from 2008 to 2010 [19]. The same report indicates that it has recorded the best GDP growth from 2007 to 2010 among all Sub-Saharan African countries with the exceptions of South Africa and Namibia. The Gambia currently has six Internet Service Providers and it is the headquarters of the Africa Coast to Europe (ACE) submarine cable. The project was launched on December 20th, 2012 and will provide direct cable connectivity to Equatorial Guinea, Liberia, Mauritania, Guinea, Sao Tome & Principe, Sierra Leone and The Gambia.

3.2 SURVEY ADMINISTRATION

The survey in The Gambia was conducted from September 19th to November 12th, 2012 at the University of The Gambia. In order to seek the consent of our potential respondents and also minimize the number of unreturned questionnaires, we first visited individual classes from the selected faculties and enlightened the participants about the research. During that period, those who were interested in participating in the research were asked to write their names under the administrative region they came from in The Gambia. This approach helped us to have participants from every region of the country. A simple random sampling method was conducted to select the research participants. This was due to the fact that more people were willing to participate in the research than the target number of 200. Each selected participant was then given a questionnaire to complete within

a week. Participants were sampled from four randomly chosen faculties, namely, Art & Science, Information and Communication Technology, Law and Business Administration. Out of the total 200 administered questionnaires, 181 valid responses were received representing about a 91% return rate. Among the valid respondents, 63 claimed to be females, 114 males and three did not indicate their gender.

Table 1: Country statistics (Source: adapted from tradingeconomics.com)

Country name	The Gambia
<ul style="list-style-type: none"> • capital city • geographic coordinates 	Banjul 13 27 N and 16 34 W
Area (square kilometers)	11,295
<ul style="list-style-type: none"> • land • water 	10,000 1,295
Land boundary (kilometers)	740
Coast line (kilometers)	80
Age structure (%)	
<ul style="list-style-type: none"> • 0-14 • 15-24 • 25-54 • 65 and above 	39.2 21.1 32.5 3.2
Population	1,883,051
<ul style="list-style-type: none"> • population growth (%) • birth rate • death rate 	2.29 32.59 births/1000 population 7.38 deaths/1000 population
Life expectancy at birth (years)	
<ul style="list-style-type: none"> • total population • male • female 	64.09 61.78 66.47
Adult prevalence rate of HIV/AIDS (%)	2
Literacy rate (age 15 and above who can read and write) (%)	
<ul style="list-style-type: none"> • total population • male • female 	51.1 60.9 41.9

4. DATA ANALYSIS & RESULTS

The data analysis phase in this paper comprises of descriptive statistics and quotations from respondents. The qualitative results reveal that most students from the University of The Gambia mainly used the Internet for social communication, followed by academic use and entertainment. However, about 18% of UTG students used this technology for unspecified activities at excessive levels (see Table 2). This demonstrates attributes that could reveal potential Internet abuse.

Table 2: Internet usage per session

usage purpose	extent of usage (%)							
	≤ 10	11-20	21-30	31-40	41-50	51-60	61-70	> 70
academic	0	5	10	25	30	35	40	16
work	8	20	13	20	4	12	2	1
social communication	6	8	12	50	14	50	14	16
entertainment	13	20	26	40	4	8	2	0
shopping	1	0	0	0	0	0	0	0
downloading movies	0	10	1	0	0	0	0	0
unspecified activities	1	2	0	0	3	4	15	6

Total respondents = 181 (11 of them did not indicate their Internet use pattern)

The percentage frequency of UTG students' use of the Internet for various purposes is illustrated by Figure 1. Further qualitative analysis shows that most UTG students use the Internet on a daily basis primarily at Internet cafés (see Table 3). One respondent wrote the following comments:

“The Internet infrastructure in the university is really poor which makes most of us to go to Internet Cafés. We have a very high tendency to use the Internet for non-academic activities once we are off-campus.” (Anonymous)

Table 3: Use frequency and place of access

Internet usage	frequency	place of access	frequency
daily	79	university	70
weekly	62	home	38
every 2 – 3 weeks	25	work	37
rarely	9	Internet café	89

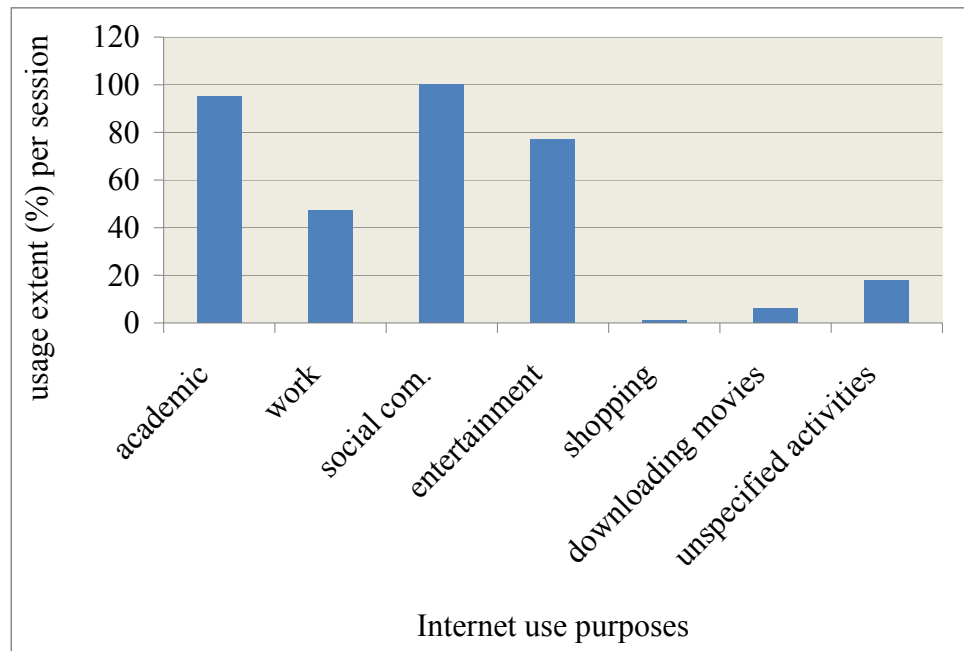


Figure 1: Internet usage pattern

In order to effectively benefit from the potentials of the Internet as a knowledge repository, one UTG student assert the following statement:

“The UTG as the nation’s only university should have an efficient Internet infrastructure for the students. The terrible Internet infrastructure force[s] us to learn using hard ways when there are modern learning tools such as the Internet. We have to utilize the full potentials of [this innovation] if we are to compete with our counterparts from other regions.” (Anonymous)

5. CONCLUSION

The findings of this paper indicate that about 18% of students at The University of The Gambia (UTG) use the Internet for unspecified purposes. The key results can be broadly summarized as follows:

- There is evidence of potential Internet abuse by UTG students.
- Most UTG students access the Internet away from UTG campuses, mainly at Internet cafés.
- The majority of UTG students use the Internet for social communication followed by academic use and entertainment, respectively.
- Majority of UTG students use the Internet on a daily basis.

The findings of this paper suggest the need for a new research spectrum on the issue of Internet abuse or addiction by university students in Africa as it happened in other regions. A significant number of African scholars have investigated the continent's university students' use of the Internet. However, one can barely find any study that looks into inappropriate use of this technology such as Internet abuse patterns. The University of The Gambia needs to provide effective Internet access on UTG campuses. As one student asserts, they tend to explore the funny view of the Internet once they access it outside university campuses. Considering the negative implications of Internet abuse on individuals and societies, African researchers cannot afford to neglect this research spectrum.

ACKNOWLEDGMENT

I am grateful to the University of Jyväskylä's Graduate School of Computing and Mathematical Sciences (COMAS) and the Department of Computer Science and Information Systems of the same university for jointly sponsoring the data collection trip to The Gambia. I would also like to acknowledge the immense support from the host institute, The Gambia Public Utilities and Regulatory Authority (PURA). Special thanks to the institute's CEO, Mr. Edrissa Jobe, for his tremendous support and encouragement. I am also grateful to the Vice Chancellor of the University of The Gambia (UTG), Professor Muhammad Kah, for allowing the survey to be conducted at his university. I am especially thankful to my dissertation supervisors Professor Airi Salminen, Professor Timo Hämäläinen and Dr. Anja Mursu for their contribution to the structure of this paper. Last but not least, I would like to thank Professor Seppo Puuronen for his comments on developing the research instruments.

REFERENCES

- [1] Ani, O. E. (2010). Internet access and use: a study of undergraduate students in three Nigerian universities. *The Electronic Library*, 28, 4, 555-567.
- [2] Ani, O. E., Esin, J. E. & Edem, N. (2005). Adoption of Information and Communication Technology (ICT) in academic libraries: a strategy for library networking in Nigeria. *The Electronic Library*, 23, 6, 701-708.
- [3] Anunobi, C. V. (2006). Survey on impediments to students' use of Internet facilities. *The Information Technologist*, 3, 2, 40-50.
- [4] Awoleye, M. O., Siyanbola, O. W. & Oladipo, F. O. (2008). Adoption assessment of Internet usage amongst undergraduates in Nigeria universities – a case study approach. *Journal of Technology Management & Innovation*, 3, 1, 84-89.
- [5] Badu, E. E. & Markwei, E. D. (2005). Internet awareness and use in the University of Ghana. *SAGE Journal Online*, 21, 4, 260-268.
- [6] Baran, J. S. & Davis, D. K. (2001). *Mass Communication Theory: Foundations, Ferment and Future*, 3rd. edition, Belmont, CA: Thomson Wadsworth.

- [7] Baran, J. S. (2002). Introduction to Mass Communication: media literacy and culture. Boston: McGraw-Hills Books.
- [8] Biradar, B. S., Rajashekhar, G. R., Sampath and Kumar (2006). A study of Internet usage by students and faculties in Kuvempu University. *Library Herald*, 44(4), 283-294.
- [9] Caldwell, C. D. & Cunningham, T. J. (2010). Internet addiction and students: implications for school counselors. Retrieved from http://counselingoutfitters.com/vistas/vistas10/Article_61.pdf
- [10] Castiglione, J. (2007). Internet abuse and possible addiction among undergraduates: a developing concern for library and university administrators. *Library Review*, 57, 5, 358-371.
- [11] Chhachhar, A. R., Khushk, G. M., Chachar, A. A. and Qureshi, B. (2013). Internet usage among university students in Pakistan. *Journal of Basic and Applied Scientific Research*, 3, 9, 31-35.
- [12] Devi, C. B. & Roy, N. R. (2012). Internet use among university students: a case study of Assam University Silchar. *Pratidhwani-A Journal of Humanities and Social Sciences*, 1, 2, 183-202.
- [13] Devito, J. A. (1991). Human communication: the basic course. 5th. edition, New Jersey: Prentice Hall.
- [14] Eisenhardt, K. M. (1989). Building Theories from Case Study Research. *The Academy of Management Review*, 14, 532-550.
- [15] Eke, F. M. (2006). Information and Communication Technologies (ICTSs), awareness and use by academic staff in tertiary institution in Imo State. *Nigerian Library and Information Science Trend: Journal of NLA, Imo State Chapter*, 4, 1/2, 20-36.
- [16] Fallow, D. (2004). The Internet and daily life: Many American use the Internet in everyday activities but traditional offline habits skill dominate. Retrieved from <http://www.pewInternet.org/pdfs/pip-college-report.pdf>.
- [17] Fatoki, O. C. (2004). Impact of library resources and the Internet on undergraduate students' research: University of Ibadan, Nigeria. *Nigerian Libraries*, 38, 1, 21-33.
- [18] George, C., Bright, A., Hurlbert, T., Linke, E. C., St. Clair, G. & Stein, J. (2006). Scholarly use of graduate students' information seeking behavior. Retrieved online from http://repository.cmu.edu/lib_science/21.
- [19] International Monetary Fund (2012). The Gambia 2011 Article IV Consultation, IMF Country Report No. 12/17, Washington, D.C.
- [20] Katz, E., Blumler, J. & Gurevitch, M. (1974). Utilization of mass communication by the individual. In J. Blumler & Katz (Eds.), the uses of mass communication: current perspectives on gratifications research (pp. 19-34). Beverly Hills, CA: Sage.

- [21] Lawal, K. O., Adegbemile, A. A., Aribisala, J. O. & Oke, S. A. (2008). A survey on the use of computers and Internet in conducting research and training in a developing country. *The Pacific Journal of Science and Technology*, 9, 1, 83-89.
- [22] Luambano, I. & Nawe, J. (2004). Internet use by students of the University of Dare es Salaam. *Library Hi Tech News*, 25, 5, 13-17.
- [23] Niemz, K., Griffiths, M., Banyard, P. (2005). Prevalence of pathological Internet use among university students and correlations with self-esteem, the General Health Questionnaire (GHQ) and disinhibition. *Cyberpsychology and Behavior*, 8, 562-570.
- [24] Nwagwu, E. W., Adekannbi, J. & Bello, O. (2009). Factors influencing use of the Internet: a questionnaire survey of students of University of Ibadan, Nigeria. *The Electronic Library*, 27, 4, 718-734.
- [25] Ojokoh, B. A. & Asaolu, M. (2005). Studies of Internet access and usage by students of the Federal University of Technology in Akure, Nigeria. *African Journal of Library, Archival and Information Science*, 15, 2, 149- 153.
- [26] Okiy, R. B. (2005). Strengthening information provision in Nigeria university libraries through information and communication technologies. *The Electronic Library*, 23, 3, 311-318.
- [27] Osang, F. (2012). Internet access in Nigeria: Perception of National Open University of Nigeria (NOUN) students. *International Journal of Emerging Technology and Advanced Engineering*, 2, 10, 492-497.
- [28] Osunade, O. & Ojo, O. O. (2006). Library and Internet usage: a case study of the University of Ibadan. *The Information Technologist*, 3, 2, 19-29.
- [29] Patchin, J. W. & Hinduja, S. (2006). Bullies move beyond the schoolyard: a preliminary look at cyberbullying. *Youth Violence and Juvenile Justice*, 4, 148-169.
- [30] Recabarren, M., Nussbaum, M. & Leiva, C. (2008). Cultural divide and Internet. *Computers in Human Behavior*, 24, 2917-2926.
- [31] Rena, R. (2008). The Internet in tertiary education in Africa: recent trends. *International Journal of Computing and ICT Research*, 2, 1, 9-16.
- [32] Rena, H. P., Pavlina, R. & Paul, S. (2007). A preliminary assessment of Google Scholar as a source of EAP students' research materials. *Internet and Higher Education*, 10, 1, 65-76.
- [33] Rosengren, K. E. (1974). Uses and gratifications: a paradigm outlined. In J. Blumler & Katz (Eds.), *the uses of mass communication: current perspectives on gratifications research* (pp. 269-286). Beverly Hills, CA: Sage.
- [34] Safdar, M., Mahmood, K. & Qutab, S. (2010). Internet use behavior and attitude of college students: a survey of Leadership College Network. *Library Philosophy and Practice (e-journal)*, paper 366.
- [35] Sahin, Y. G., Balta, S. & Ercan, T. (2010). The use of Internet resources by university students during their course project elicitation: a case study. *The Turkish Online Journal of Educational Technology*, 9, 2, 234-244.

- [36] Scherer, K. (1997). College life online: healthy and unhealthy Internet use. *Journal of College and Student Development*, 38, 6, 655-663.
- [37] Siomos, K. E., Dafoulie, E. D., Braimiotis, D. A., Mouzas, O. D. & Angelopoulos, N. V. (2008). Internet addiction among Greek national adolescent students. *Cyberpsychology and Behavior*, 11, 653-657.
- [38] Tahiroglu, A. Y., Celik, G. G., Uzel, M., Ozcan, N. & Avci, A. (2008). Internet use among Turkish adolescents. *Cyberpsychology and Behavior*, 11, 537-543.
- [39] Tellis, W. (1997). Introduction to Case Study, the Qualitative Report, 3, 2. Retrieved from <http://www.nova.edu/ssss/QR/QR3-2/tellis1.html>.
- [40] Udende, P. (2010). Internet access and use among students of the University of Ilorin, Nigeria. *Journal of Communication and Media Research*, 2(1), 33-42.
- [41] United States census bureau (2012). Retrieved from <http://www.census.gov/compendia/statab/2012/tables/12s1392.pdf>
- [42] Yin, R. K. (1984). *Case Study Research: Design and Methods*, Beverly Hills, Calif: Sage Publications.
- [43] Young, K.S. (2004). Internet addiction: a new clinical phenomenon and its consequences. *American Behavioral Scientist*, 48, 4, 402-415.
- [44] Young, K. S. & Rogers, R. C. (1998). The relationship between depression and Internet addiction. *Cyberpsychology and Behavior*, 1, 25-28.
- [45] Young, K. S. (1996). Addictive use of the Internet: a case study that breaks the stereotype. *Psychological Reports*, 79, 899-902.

Information about the author:

Almamy Touray is a PhD candidate in Computer Science at the Department of Computer Science and Information Systems at the University of Jyväskylä in Finland. He obtained MSc. in Computational Engineering (Digital Transmission) from Friedrich-Alexander University Erlangen-Nuremberg in Germany and a BSc. (honors) in Computer Science from Usamnu Dandofiyu University in Nigeria. Almamy has worked for The Gambia Telecommunications Company Limited (GAMTEL) as the Network Administrator and Manager of Networks and Systems Security, respectively. He also served as an adjunct lecturer at the University of The Gambia where he lectured Computer Architecture, Computer Networks and Telecommunications and Data Networks. Almamy's research interest focuses on Internet diffusion, adoption and domestication as well as ICT and development.

Received: 01 November 2013

Revised: 11 November 2013