

# GLOBAL JOURNAL OF HUMAN SOCIAL SCIENCES

ISSN: 0975-587X

DISCOVERING THOUGHTS AND INVENTING FUTURE

exploration  
of  
**8** innovations

Volume 11

Issue 1  
VERSION 1.0

## Highlights

Case Study of Ilorin City

Physically Challenged in Nigeria

Economic Attitudes and Responses

Implications for Forest Sustainability

*February 2011*



GLOBAL JOURNAL OF HUMAN SOCIAL SCIENCE

---





GLOBAL JOURNAL OF HUMAN SOCIAL SCIENCE

---

VOLUME 11 ISSUE 1 (VER. 1.0)

GLOBAL ASSOCIATION OF RESEARCH

© Global Journal of Human  
Social Sciences. 2011.

All rights reserved.

This is a special issue published in version 1.0  
of "Global Journal of Human Social  
Sciences." By Global Journals Inc.

All articles are open access articles distributed  
under "Global Journal of Human Social  
Sciences"

Reading License, which permits restricted use.  
Entire contents are copyright by of "Global  
Journal of Human Social Sciences" unless  
otherwise noted on specific articles.

No part of this publication may be reproduced  
or transmitted in any form or by any means,  
electronic or mechanical, including  
photocopy, recording, or any information  
storage and retrieval system, without written  
permission.

The opinions and statements made in this  
book are those of the authors concerned.  
Ultraculture has not verified and neither  
confirms nor denies any of the foregoing and  
no warranty or fitness is implied.

Engage with the contents herein at your own  
risk.

The use of this journal, and the terms and  
conditions for our providing information, is  
governed by our Disclaimer, Terms and  
Conditions and Privacy Policy given on our  
website <http://www.globaljournals.org/global-journals-research-portal/guideline/terms-and-conditions/menu-id-260/>.

By referring / using / reading / any type of  
association / referencing this journal, this  
signifies and you acknowledge that you have  
read them and that you accept and will be  
bound by the terms thereof.

All information, journals, this journal,  
activities undertaken, materials, services and  
our website, terms and conditions, privacy  
policy, and this journal is subject to change  
anytime without any prior notice.

Incorporation No.: 0423089  
License No.: 42125/022010/1186  
Registration No.: 430374  
Import-Export Code: 1109007027  
Employer Identification Number (EIN):  
USA Tax ID: 98-0673427

## Global Journals Inc.

(A Delaware USA Incorporation with "Good Standing"; **Reg. Number: 0423089**)

Sponsors: *Global Association of Research  
Open Scientific Standards*

### *Publisher's Headquarters office*

Global Journals Inc., Headquarters Corporate Office,  
Cambridge Office Center, II Canal Park, Floor No.  
5th, **Cambridge (Massachusetts)**, Pin: MA 02141  
United States

USA Toll Free: +001-888-839-7392

USA Toll Free Fax: +001-888-839-7392

### *Offset Typesetting*

Global Journals Inc., City Center Office, 25200  
Carlos Bee Blvd. #495, Hayward Pin: CA 94542  
United States

### *Packaging & Continental Dispatching*

Global Journals, India

### *Find a correspondence nodal officer near you*

To find nodal officer of your country, please  
email us at [local@globaljournals.org](mailto:local@globaljournals.org)

### *eContacts*

Press Inquiries: [press@globaljournals.org](mailto:press@globaljournals.org)

Investor Inquiries: [investers@globaljournals.org](mailto:investers@globaljournals.org)

Technical Support: [technology@globaljournals.org](mailto:technology@globaljournals.org)

Media & Releases: [media@globaljournals.org](mailto:media@globaljournals.org)

### *Pricing (Including by Air Parcel Charges):*

*For Authors:*

22 USD (B/W) & 50 USD (Color)

*Yearly Subscription (Personal & Institutional):*

200 USD (B/W) & 500 USD (Color)



## EDITORIAL BOARD MEMBERS (HON.)

---

**John A. Hamilton,"Drew" Jr.,**

Ph.D., Professor, Management  
Computer Science and Software  
Engineering  
Director, Information Assurance  
Laboratory  
Auburn University

**Dr. Henry Hexmoor**

IEEE senior member since 2004  
Ph.D. Computer Science, University at  
Buffalo  
Department of Computer Science  
Southern Illinois University at Carbondale

**Dr. Osman Balci, Professor**

Department of Computer Science  
Virginia Tech, Virginia University  
Ph.D.and M.S.Syracuse University,  
Syracuse, New York  
M.S. and B.S. Bogazici University,  
Istanbul, Turkey

**Yogita Bajpai**

M.Sc. (Computer Science), FICCT  
U.S.A.Email:  
yogita@computerresearch.org

**Dr. T. David A. Forbes**

Associate Professor and Range  
Nutritionist  
Ph.D. Edinburgh University - Animal  
Nutrition  
M.S. Aberdeen University - Animal  
Nutrition  
B.A. University of Dublin- Zoology

**Dr. Wenying Feng**

Professor, Department of Computing &  
Information Systems  
Department of Mathematics  
Trent University, Peterborough,  
ON Canada K9J 7B8

**Dr. Thomas Wischgoll**

Computer Science and Engineering,  
Wright State University, Dayton, Ohio  
B.S., M.S., Ph.D.  
(University of Kaiserslautern)

**Dr. Abdurrahman Arslanyilmaz**

Computer Science & Information Systems  
Department  
Youngstown State University  
Ph.D., Texas A&M University  
University of Missouri, Columbia  
Gazi University, Turkey

**Dr. Xiaohong He**

Professor of International Business  
University of Quinnipiac  
BS, Jilin Institute of Technology; MA, MS,  
PhD,. (University of Texas-Dallas)

**Burcin Becerik-Gerber**

University of Southern California  
Ph.D. in Civil Engineering  
DDes from Harvard University  
M.S. from University of California, Berkeley  
& Istanbul University

**Dr. Bart Lambrecht**

Director of Research in Accounting and Finance  
Professor of Finance  
Lancaster University Management School  
BA (Antwerp); MPhil, MA, PhD  
(Cambridge)

**Dr. Carlos García Pont**

Associate Professor of Marketing  
IESE Business School, University of Navarra  
Doctor of Philosophy (Management),  
Massachusetts Institute of Technology (MIT)  
Master in Business Administration, IESE,  
University of Navarra  
Degree in Industrial Engineering,  
Universitat Politècnica de Catalunya

**Dr. Fotini Labropulu**

Mathematics - Luther College  
University of Regina  
Ph.D., M.Sc. in Mathematics  
B.A. (Honors) in Mathematics  
University of Windsor

**Dr. Lynn Lim**

Reader in Business and Marketing  
Roehampton University, London  
BCom, PGDip, MBA (Distinction), PhD,  
FHEA

**Dr. Mihaly Mezei**

ASSOCIATE PROFESSOR  
Department of Structural and Chemical  
Biology, Mount Sinai School of Medical  
Center  
Ph.D., Eötvös Loránd University  
Postdoctoral Training,  
New York University

**Dr. Söhnke M. Bartram**

Department of Accounting and Finance  
Lancaster University Management School  
Ph.D. (WHU Koblenz)  
MBA/BBA (University of Saarbrücken)

**Dr. Miguel Angel Ariño**

Professor of Decision Sciences  
IESE Business School  
Barcelona, Spain (Universidad de Navarra)  
CEIBS (China Europe International Business School).  
Beijing, Shanghai and Shenzhen  
Ph.D. in Mathematics  
University of Barcelona  
BA in Mathematics (Licenciatura)  
University of Barcelona

**Philip G. Moscoso**

Technology and Operations Management  
IESE Business School, University of Navarra  
Ph.D in Industrial Engineering and Management, ETH Zurich  
M.Sc. in Chemical Engineering, ETH Zurich

**Dr. Sanjay Dixit, M.D.**

Director, EP Laboratories, Philadelphia VA  
Medical Center  
Cardiovascular Medicine - Cardiac  
Arrhythmia  
Univ of Penn School of Medicine

**Dr. Han-Xiang Deng**

MD., Ph.D  
Associate Professor and Research  
Department Division of Neuromuscular  
Medicine  
Davee Department of Neurology and Clinical  
Neuroscience  
Northwestern University  
Feinberg School of Medicine

**Dr. Pina C. Sanelli**

Associate Professor of Public Health  
Weill Cornell Medical College  
Associate Attending Radiologist  
NewYork-Presbyterian Hospital  
MRI, MRA, CT, and CTA  
Neuroradiology and Diagnostic  
Radiology  
M.D., State University of New York at  
Buffalo, School of Medicine and  
Biomedical Sciences

**Dr. Roberto Sanchez**

Associate Professor  
Department of Structural and Chemical  
Biology  
Mount Sinai School of Medicine  
Ph.D., The Rockefeller University

**Dr. Wen-Yih Sun**

Professor of Earth and Atmospheric  
SciencesPurdue University Director  
National Center for Typhoon and  
Flooding Research, Taiwan  
University Chair Professor  
Department of Atmospheric Sciences,  
National Central University, Chung-Li,  
TaiwanUniversity Chair Professor  
Institute of Environmental Engineering,  
National Chiao Tung University, Hsin-  
chu, Taiwan.Ph.D., MS The University of  
Chicago, Geophysical Sciences  
BS National Taiwan University,  
Atmospheric Sciences  
Associate Professor of Radiology

**Dr. Michael R. Rudnick**

M.D., FACP  
Associate Professor of Medicine  
Chief, Renal Electrolyte and  
Hypertension Division (PMC)  
Penn Medicine, University of  
Pennsylvania  
Presbyterian Medical Center,  
Philadelphia  
Nephrology and Internal Medicine  
Certified by the American Board of  
Internal Medicine

**Dr. Bassey Benjamin Esu**

B.Sc. Marketing; MBA Marketing; Ph.D  
Marketing  
Lecturer, Department of Marketing,  
University of Calabar  
Tourism Consultant, Cross River State  
Tourism Development Department  
Co-ordinator , Sustainable Tourism  
Initiative, Calabar, Nigeria

**Dr. Aziz M. Barbar, Ph.D.**

IEEE Senior Member  
Chairperson, Department of Computer  
Science  
AUST - American University of Science &  
Technology  
Alfred Naccash Avenue – Ashrafieh

## PRESIDENT EDITOR (HON.)

### **Dr. George Perry, (Neuroscientist)**

Dean and Professor, College of Sciences

Denham Harman Research Award (American Aging Association)

ISI Highly Cited Researcher, Iberoamerican Molecular Biology Organization

AAAS Fellow, Correspondent Member of Spanish Royal Academy of Sciences

University of Texas at San Antonio

Postdoctoral Fellow (Department of Cell Biology)

Baylor College of Medicine

Houston, Texas, United States

## CHIEF AUTHOR (HON.)

### **Dr. R.K. Dixit**

M.Sc., Ph.D., FICCT

Chief Author, India

Email: [authorind@computerresearch.org](mailto:authorind@computerresearch.org)

## DEAN & EDITOR-IN-CHIEF (HON.)

### **Vivek Dubey(HON.)**

MS (Industrial Engineering),

MS (Mechanical Engineering)

University of Wisconsin, FICCT

Editor-in-Chief, USA

[editorusa@computerresearch.org](mailto:editorusa@computerresearch.org)

### **Sangita Dixit**

M.Sc., FICCT

Dean & Chancellor (Asia Pacific)

[deanind@computerresearch.org](mailto:deanind@computerresearch.org)

### **Luis Galárraga**

J!Research Project Leader

Saarbrücken, Germany

### **Er. Suyog Dixit**

(M. Tech), BE (HONS. in CSE), FICCT

SAP Certified Consultant

CEO at IOSRD, GAOR & OSS

Technical Dean, Global Journals Inc. (US)

Website: [www.suyogdixit.com](http://www.suyogdixit.com)

Email: [suyog@suyogdixit.com](mailto:suyog@suyogdixit.com)

### **Pritesh Rajvaidya**

(MS) Computer Science Department

California State University

BE (Computer Science), FICCT

Technical Dean, USA

Email: [pritesh@computerresearch.org](mailto:pritesh@computerresearch.org)



## CONTENTS OF THE VOLUME

---

- i. Copyright Notice
  - ii. Editorial Board Members
  - iii. Chief Author and Dean
  - iv. Table of Contents
  - v. From the Chief Editor's Desk
  - vi. Research and Review Papers
- 
1. Cyber Social Networks and Social Movements. **1-16**
  2. Package for Controlling Street Begging and Rehabilitating Beggars and the Physically Challenged in Nigeria: Paper for Policy Consideration. **17-24**
  3. Impact of Climate on Urban Agriculture: Case Study of Ilorin City, Nigeria. **25-30**
  4. Knowledge Management in Education in Indonesia: An Overview. **31-44**
  5. Socio-Economic Aspects of Fuel Wood Business in the Forest and Savanna Zones of Nigeria: Implications for Forest Sustainability and Adaptation to Climate Change. **45-56**
  6. Determinants of Age at First Sexual Intercourse for Youths of Nepal. **57-64**
  7. Sexual Behavior and Perception of Hiv/Aids in Nigerian Tertiary Institutions: University of Ilorin, a Case Study **65-71**
  8. Economic Attitudes and Responses to Waste Facilities location in Residential Areas: The Case of Landfills in Lagos Metropolis, Nigeria. **72-81**
- 
- vii. Auxiliary Memberships
  - viii. Process of Submission of Research Paper
  - ix. Preferred Author Guidelines
  - x. Index

# NEWTON'S 2ND LAW DESCRIBED BY MEANS OF ART

ABRAHAM TAMIR

DEPT. OF CHEMICAL ENGINEERING

The major objective of this article and future once is to describe scientific subjects by means of artworks. This is a new approach developed by the author that makes the subjects more understandable and perceptible. According to Cheng-Dau Lee, Nobel laureate in physics: "Both, science and art are not separated from each other. With the help of science we can find out routines of nature where by means of art we can describe the emotions of nature."

Sir Isaac Newton, born in UK (1643-1727), was a mathematician, physicist, astronomer, alchemist, inventor, philosopher and is often regarded as the most influential scientist in history. Newton is also known for his many inventions. The discovery of Johannes Kepler of the three fundamental laws of planetary motion, which described the Copernican Theory, was only understood when Newton discovered the Laws of Gravitation and motion and conservation of momentum. Newton made fundamental contributions to analytic geometry, algebra and calculus during the years 1664 to roughly the spring of 1696. He also shared credits in the development of the calculus with Gottfried von Leibniz. The year 1666 was the peak of Newton's achievements. He invented the reflecting telescope and made the crucial experiment that became his most famous experiment using a prism by which he revealed the spectrum of light. Newton had many quotes among his famous once were: "I can calculate the motion of heavenly bodies, but not the madness of people" and "To me there has never been a higher source of earthly honor or distinction than that connected with advances in science".

Newton was a premature infant not expected to live who showed no particular promise in his early years. He had a very unhappy childhood, which explains why he showed signs all through his life of a persecution mania. Surprisingly, Newton was highly productive only for eighteen years, 1669-1687, while a breakdown at an age of 51 ended his scientific work. He then became a highly paid government official in London with little further interest in mathematical research. Newton never married, but was at his happiest in the role of patron to younger scientists while from 1703 he served as a tyrannical president of the Royal Society. He was knighted in 1705.

Newton's 2nd Law states that if you do place a force **F** on an object of mass **m**, it will accelerate with acceleration **a**, i.e., change its velocity in the direction of the force. Force, a push or a pull exerts on a body, is defined as any influence that causes a free body to undergo a change in speed, a change in direction, or a change in shape. Mass is a measurement of how much matter there is in a body. The relationship between the three quantities is given by **F = ma** where if the object is accelerated only by gravity force with acceleration **g** then **F = mg**. The last equation is described by means of artworks as follows. Force **F** is described by the artwork [1] of Sisyphus pushing a heavy boulder that was painted by Franz von Stuck (1863-1928), a German artist. The mythological figure of Sisyphus is one of the best well-known penitents of the underworld. The Gods' punishment for his hubris is the task of pushing again and again a heavy boulder up a mountain that always rolls back after reaching the summit. The pushing action requires the investment of force **F** and observation at the standing position of Sisyphus gives a direct impression of **F**. Mass **m** is demonstrated by the image of fat David [2] that is a modification of the original well-known artwork King David [3] of Michelangelo, an Italian Renaissance painter, sculptor, architect, poet, and engineer. Fat David is an image from an advertising campaign created for the German Olympic Sport Committee where the message was "If you don't move, you get fat". And finally, acceleration **g** is described by the artwork "Woman Falling From a Balcony" [4,5] painted by Fernando Botero (1932) a Colombian figurative artist. In conclusion the author believes that the above description shows how Newton's 2nd Law can be demonstrated via artworks.

## REFERENCES RÉFÉRENCES REFERENCIAS

1. <http://www.illusionsgallery.com/Sisyphus.html>
2. [syque.com/ds/pix/florence\\_feb08/fat\\_david\\_800.jpg](http://syque.com/ds/pix/florence_feb08/fat_david_800.jpg)
3. [www.edu-negev.gov.il/bs/mmtt/ren/david.jpg](http://www.edu-negev.gov.il/bs/mmtt/ren/david.jpg)
4. BOTERO, HARRY N. ABRAMS, INC., PUBLISHERS; p.40
5. <http://www.book530.com/painting/109245/Fernando-Botero-Woman-Falling-From-A.html>



GLOBAL JOURNAL OF HUMAN SOCIAL SCIENCE  
Volume 11 Issue 1 Version 1.0 February 2011  
Type: Double Blind Peer Reviewed International Research Journal  
Publisher: Global Journals Inc. (USA)  
ISSN: 0975-587X

## Cyber Social Networks and Social Movements

By ISoran Shangapour, Seidawan Hosseini, Hashem Hashemnejad

IUST University

**Abstract-** While communication scholars suggest that cyber social networks can serve as an important resource for social movement communication, few studies examine which and how special features of these social networks actually can intensify social movements and weaken government's authority. However, our study highlights the importance of various key factors affecting the interaction between cyber social networks and social movements. The most important factors are ongoing network leadership, user practices, and online –offline participation. Furthermore, we considered prominent factors of third space and virtual societies related to Tehran citizens that can lead cyber activism to social movements. This article also seeks for considering a key question for socio-political pluralists in the digital era and virtual societies.

**Keywords:** *virtual spaces, socio-political movements, cyber social networks, virtual societies.*

**Classification:** *GJHSS-A FOR Classification: 160808, 160810*



*Strictly as per the compliance and regulations of:*



# Cyber Social Networks and Social Movements

Soran Shangapour, Seidawan Hosseini, Hashem Hashemnejad

**Abstract-** While communication scholars suggest that cyber social networks can serve as an important resource for social movement communication, few studies examine which and how special features of these social networks actually can intensify social movements and weaken government's authority. However, our study highlights the importance of various key factors affecting the interaction between cyber social networks and social movements. The most important factors are ongoing network leadership, user practices, and online –offline participation. Furthermore, we considered prominent factors of third space and virtual societies related to Tehran citizens that can lead cyber activism to social movements. This article also seeks for considering a key question for socio-political pluralists in the digital era and virtual societies.

**Keywords:** *virtual spaces, socio-political movements, cyber social networks, virtual societies.*

## I. INTRODUCTION

In the era of virtual communication, increasingly Cyber Social Movements (CSMs) seek for organizing and campaign online, the question arises how and which characteristics can bring about a new form of socio-political activism along with consequences for constituting social demonstration in real-physical public places. Here, at first, we will discuss some arguments for and against CSMs and the role of internet by this way. The CSMs, like many new technologies before it, has been imbued with a sense of optimism that can somehow go beyond the trends of politics. It is now home to a multitude of groups, races and religions dedicated to resist and campaign against particular issues and politics. Online public communications are parts of the process of realizing the public sphere – a space where democracy can enact – allowing us to analyze how democratic values and identification shared as democratic citizens are achieved and maintained; how socio-political cultures are generated – essentially, to imagine how civil society can organize democratically for politically progressive ends (Habermas, 1989). In addition, the multiplicity of groups and ideologies which present online permits the growth of much broader networks to create a vast web of oppositional politics and social changes. These social networks have become base to mediated activity that aims to raise people's awareness, to give a voice to those

who do not have one, to offer social empowerment, to permit disparate people and causes to organize themselves and form alliances, and ultimately to be used as a tool for social changes. These new networks with its additive, interwoven, interactive and polycentric form have reinvented transnational cyber activism and can accommodate radically different types of political habits within various places in different times, offering a new type of socio-political engagement. This apparently new mediated politics of the 21st century maintains a promise of political hope. Similarly, Benkler (2006) claims that internet has a potential to change the practice of democracy thoroughly owing to its participatory and interactive characteristics. It allows all citizens to alter their relationship to the public sphere, to become creators and primary subjects, to become engaged in social production. In this sense the internet is ascribed the powers of democratization. Besides, Salter (2003) argues that the internet is a novel technological asset for democratic communications because of its decentred, textual communications system, most often with the content which is provided by users. On this basis, the requisite features of Cyber Social Movements are accorded with them which have grown out of a decrease in party allegiances and class alliances. CSMs are more fluid and informal networks of action than the class and party politics of past. In this regard, according to Naomi Klein (2000) notion, the internet facilitates international communication among non-governmental organizations (NGOs), and thus permits protesters to respond on an international level to local events while requiring minimal resources and bureaucracy. This may be through the sharing of experience and tactics on a transnational basis to inform and increase the capacity of local campaigns. As Rheingold (2002) notes, advances in personal, mobile informational technology are rapidly providing the structural elements for the existence of fresh kinds of highly informed, autonomous communities that coalesce around local lifestyle choices, global political demands and everything in between. These multiple networks of connected citizens and activists link diverse communities, providing the basis for the possibility of a new politics of alliance and solidarity to overcome the limitations of postmodern identity politics (Bennett, 2004).

On the other side, Breslow (1997) argues that the internet promotes a sense of sociality, but its anonymity and shortage of spatiality and density may be

*About-IUST University*

*E-Mail-soran.shangapour@gmail.com, seidawan82@yahoo.com, hashemnejad@iust.ac.ir*



counterproductive to solidarity. Just as the same as, Van d'er Donk et al. (2004) states that the extreme simplicity of mobilization may devalue it as a socio-political resource that attracts public attention and respect. The internet may also be devalued by activists since out of some forms of collective protest can cause fun and adventure. Indeed online activism can be seen as lazy politics – it provides people with feeling good but does very little. It allows like-minded individuals and organizations to talk to each other. It can be criticized for further distancing people from each other and deepening already abstract social relations as well as increasing competition among organizations. Moreover, on the basis of Klein idea, the internet is an organizing model for a new form of political protest that is international, decentralized, with diverse interests but common targets. These themes of multiplicity and poly centrality recur throughout the literature and are assessed both negatively and positively.

Smith and Smythe (2001a,2001b) note that the internet has revealed a socio-political space for the alternative political notice of this global social movement just as progressive cyber network communications has been described as serving as 'an alternative political realm' (Downing, 1989). Since the internet has not led to a greater integration within civil society due to the restrictive policies on external links adopted by civil society organizations and a lack of trust and solidarity (Kavada, 2005), this indicates the fact that new media technology itself does not cause to a brand new age of political collective radicalism. On the other hand, global network of nongovernmental organizations (NGO) is to do those whose mission is to empower and support organizations, social movements and individuals in and via the use of information and communication technologies (ICT) to build strategic communities and initiatives for the purpose of making meaningful contributions to equitable human development, social justice, participatory political processes and environmental sustainability. (APC, March 2006) In this way, Coombs (1998) argues that the internet may increase the power of grass roots groups because it can enable networks of citizens to challenge corporate control and can set up their constitution by suggesting new identity within new socio-political territory (Cleaver, 1998). This territory can account for what have been called postmodern tendencies away from static power structures by making a means for seeing how it has become more fluid and dispersed without necessarily losing strength (Hardt & Negri, 2004). To optimists, they also appear to have opened up new flexible spaces for public and private participation as well as wide public participation in political matters (Rheingold, 1993, 2002; Smith and Smythe, 2001a; Van Aelst, 2002). Our purpose is to undertake this subject which has two categories. Firstly, we tried to highlight and identify more

important features for cyber social networks related to consequent social movements and collective identities. Though discussions of each of these features can be found in the existing social movement literature, we believe that more extensive consideration would be profitable. A secondary goal is to present a comprehensive and accessible account of an important recent example of cyber-activities which suggested it at different urban public places. Here, as a case study, we will show why and how people in Tehran are interested in using cyber social networks instead of other previous kind of communication in urban spaces. Also problems and opportunities which were brought by these networks will be discussed and criticized. In the next section, we provide a brief history of using cyber activism, locating it within the broader conflict between the protests and the totalitarian regime. The section that follows provides a detailed description of the cyber network communication system, demonstrating the utility of its various factors. Furthermore, we assume prominent factors of third space and postmodern cities related to cyber social networks that can lead activism to physical cities. In the end, we conclude with a brief discussion of the importance of our findings.

As it seems an introduction for collective identity and social movement can be useful to determine features of cyber social networks, we will begin with a brief definition of aspects.

## II. COLLECTIVE IDENTITY

Melucci (1996) sees collective identity as a continuous, dynamic and self-reflexive process defined by its multiplicity of interactions, negotiations and conflicts among fellow participants. The internet, relying as it does on a network of networks can assist collective identity and reinforce solidarity. It takes part in the process of meaning construction. The nature and scope of the technology affects not only the way the movement communicates its aims and objectives but also its geographical scale, organizing structure and collective identity. The decentralized, non-hierarchical modes of organizing allow for diverse political agendas and identities to exist. Collective identity is a 'shared definition produced by several interacting individuals who are concerned with the orientations of their actions as well as the field of opportunities and constraints in which their actions take place' (Melucci, 1989).

Collective identity defines boundaries of who is within the group, what the group believes, how the group sees the world and, ultimately, helps to establish trust, which is essential in getting members to take actions that may be time-consuming, uncomfortable or even dangerous (della Porta & Diani, 2000). Collective identities are important because they help attract new members and sustain old ones; they are often what

officials respond to and what make up the raw materials from which mainstream media representations will be constructed. Social movement identities are the 'process by which social actors recognize themselves and are recognized by other actors' (della Porta and Diani, 2000). Most of observers argue that the internet is increasingly enabling new collective identities aim to change cultural codes, social movements also create new identities which both help to recruit and sustain membership. In terms of the connections between social movement, collective identities and the internet, scholars are still struggling to understand this phenomenon. Warkentin (2001), Postmes and Brunsting (2002) are all optimistic, discussing that the anonymity and isolation found on the cyberspace may actually enhance group salience, as actors focus on commonalities rather than differences. Indeed, they believe that unity among different groups happens by giving permission to social movement which can act more easily, attract more new members than it had been possible.

### III. SOCIAL NETWORKS

Networks are open structures, able to expand without limits, integrating new nodes as long as they are able to communicate within the network, namely as long as they share the same communication codes. Keck and Sikkink (1998) define networks as essentially 'communicative structures'. Podolny and Page (1998) argue that, unlike markets and hierarchies, network forms of organization are characterized by enduring relationships and exchanges based on trust, legitimacy and ethical behavior. Social networks are important actors in democratic societies. They are key spaces for formulating, advancing and leveraging the interests of civil society against elites and authorities. As such, they serve as sites of public advocacy around social and political issues, which markets and states are more reticent to address (Mueller, 2004). In essence, social movements are social networks that engage in sustained collective actions, have a common purpose and challenge the interests and beliefs of those with power (Tarrow, 2005). Diani believes that 'recent scholarship points to the fact that interest in the relationship between social movements and social networks has grown both in the range of topics addressed, and the depth of research results' (2003: 1). Many of the authors in Diani and McAdam's book, *Social Movements and Networks* (2003), treat networks as a central feature of social movements. Although transnational activist networks existed long before the internet (Keck and Sikkink, 1998), there is accumulating evidence that the internet accelerates network and social movement formation on local and global levels (Castells, 1996). Commentators from a wide range of

disciplines have noted that in recent years, society has become more network-based (Castells, 1996; Hardt and Negri, 2000). Similarly, leading theorists are beginning to recognize the prominence of networks in social movements (Diani, 2003; Gerlach, 2001). Although Keck and Sikkink (1998) remind us that activist networks are far from new, Castells (1996) makes it clear that such a pervasive 'networking logic' is gradually supplanting earlier, more linear and hierarchical paradigms, which allows for more democratic processes.

### IV. FEATURES

New Social Movements share common characteristics with web-based communication: they lack membership forms, statutes and other formal means of organizing; they may have phases of visibility and phases of relative invisibility; NSMs may have significant overlaps with each other and are liable to rapid change in form, approach and mission. Furthermore, the ability of new communication technologies to operate globally and respond to global economic agendas in a swift and timely manner is a key to their contemporary capacity to mobilize against the vagaries of global capital. In these cases, Redden (2001) argues 'the Internet is used as a kind of metaconnection between more traditional local-level organizational activities such as meetings, telephone trees, leafleting, and posting flyers and stickers'. According to Castells's (1997) notion, the three essential activities in which the cyberspace community engages to create a virtual nation are: working on a political project (behavioral); maintaining the signification of the nation (cognitive); and maintaining a sodality (affective). These elements should be present in the construction of a virtual nation. To develop a design pattern of how social movements are affected by new ICTs, we must first understand exactly how and why activists acquire complex technical skills—or, alternatively, how and why technically skilled individuals or communities become activists.

### V. BOUNDARY, CONSCIOUSNESS AND NEGOTIATION

Taylor and Whittier (1992) offer a framework for assessing collective identity in social movements, which they believe provides a "conceptual bridge linking theoretical approaches in the symbolic interactionist tradition with existing theory in social movements". Their three categories are: boundaries, consciousness and negotiation. Boundaries indicate the territory of the group – who belongs to the movement and does not. This means that the movement should establish distinctions between itself and other societal entities in a process of self-affirmation. Consciousness includes the creation of cognitive frames or schemas for interpreting

reality. Finally, their analytical framework suggests that negotiation is a category of significance to social movements as members often must resist dominant evaluations of themselves and their values and offer alternative means of thinking and acting in both public and private spheres.

## VI. USER PRACTICES

One of the more effective features of social networks is user practices in technical changes. A large number of studies in the history of technology underline the fact that extremely important shifts can be initiated not only by highly skilled designers, developers, and corporations but also by less-skilled users of technology (Bijker & Law, 1992; Fischer, 1992; Landauer, 1999). Since nowadays, democracy experience, social movements and collective identity are created in a daily practice through new media, it is essential to notice the specific ways in which activists put technologies into practice.

## VII. NETWORK LEADERSHIP

Leadership arises within communities of practice whenever people work together and make meaning of their experiences and when people participate in collaborative forms of action across the dividing lines of perspective, values, beliefs, and cultures (Drath & Palus 1994; Drath 2001)" (McGonagill & Reinelt, 2010). So no longer did you have a situation where blind commands were issued which the others obediently had to carry out. The leaders were now properly informed of the situation inside the country and any suggestions they made could be corrected by those "in the field." (Jenkin, 1995, Garrett & Edwards, 2007)

## VIII. ONLINE-OFFLINE PARTICIPATION

Klein (2000) argues that the cyber social networks facilitate international communication among non-governmental organizations (NGOs), and allow protesters to participate in socio-political events both online and offline. But the online participation is often about moving people to action offline (Fenton, 2008). It is about building relationships and forging community rather than simply providing information (Diani, 2001). Castells (1996) argues that the networking logic of the internet dovetails with network formation offline. This confluence greatly aided social movement groups such as the Zapatistas, who continue to wage an indigenous rights struggle in southern Mexico during the mid to late 1990s (Cleaver, 1998; De Angelis, 2000).

## IX. GENERAL MODES OF INTERNET COMMUNICATION BY CYBER ACTIVISTS

Denning (2001) recognizes five general modes of internet communication by social movement activists and in a similar way, Ronfeldt and Arquilla (2001) offer a useful model for understanding the non-hierarchical structure of the cyber social network (Pickard, 2006).

- Collecting and providing information;
- Publication of information; assists action and mobilization;
- Dialogue; makes lateral linkages;
- Coordinating action; serving as an outlet for creative expression; and
- lobbying decision-makers.

Furthermore, Gibson and Ward (2000) utilize a similar typology that includes:

- Information provision;
- Campaigning to recruit voters;
- Generating resources;
- Building links between organizations; and
- Promoting participation in political processes.

As it can be seen, we have five major steps which are used by cyber activism that play an effective role.

Collecting and providing information Cyber social networks allow for the dissemination of information regarding movement identity, views and issues to interested recipients both inside and outside the movement. Publication of information; assists action and mobilization CSNs serve as instruments of mobilization, defined as the organizing of collective action and initiatives aimed at producing specific outcomes. These networks can coordinate initiatives and action (Barlow, 1988; Kessler, 1984, Stein, 2009) and spread viewpoints designed to galvanize action, a process referred to as 'consensus mobilization' (Tarrow, 2005). Dialogue; makes lateral linkages CSNs function as relatively autonomous sites of interaction and dialog. According to Fraser (1993) such spaces are necessary to further participatory parity between dominant and subordinate groups within larger spheres of discourse. Moreover, Downing (2001) adds that the internal dialog these spaces permit, which often involve shared processes of meaning construction between activist producers and particularly active audiences, help movement participants to arrive at common understandings of their problems and strategies. Cyber activists use these networks to communicate laterally and build networks among movement members. The alternative media can link social change activists by making them aware of one another's views and interests and by uniting communities of interest across national and transnational space (Barlow, 1988; Kessler, 1984;

Steiner, 1992). CSNs can function as a site for creative expression. As Downing (2001) points out, political communication does not always take the form of rational argumentation. Emotion, imagination and aesthetics are central aspects of much political expression, taking such forms as satire, irony, cartoon, caricature, slander and pornography (Downing, 2001). Lobbying decision-makers, fundraising and resource generation. People use CSNs, have more chance to succeed at presenting their issues to decision-makers. They use bureaucratic advocacy to influence the agenda, however at a slower pace. Also social movements can use the CSNs to engage in fundraising and resource generation. Movement groups attempt to raise financial support and resources through a variety of means, including requests for donations, sale of merchandise, building member databases and recruiting new members, personnel and volunteers (Costanza-Chock, 2003; Van Aelst & Walgrave, 2002). Since architecture has been a significant part of a repertoire of cultural symbols that political and cultural elites have used to 'flag' the nation (Billig, 1995), 'invent tradition' (Hobsbawm & Ranger, 1983) and 'discursively construct' identities (Wodak, 1999), it can be useful for designing these virtual environments. In the next section, we investigate the features of "third space" and postmodern urbanism experiences in creating real public spaces which can be useful for designing cyber social networks.

## X. THIRD SPACE

"Third space" in Soja's eponymous work (1996), defined as 'a purposefully tentative and flexible term that attempts to capture what is actually a constantly shifting and changing milieu of ideas, events, appearances, and meanings'. Soja sees first space as having been explored chiefly through its 'readable texts and contexts', and second space through 'its prevailing representational discourses'. Third space is to be explored spatially, 'to improve the world in some significant way'. The concept of third space can be broadly used to highlight the 'othering' of geographical space and social spatiality. In addition, Oldenburg (1999) identifies some of the specific characteristics of third places:

- They are on neutral ground;
- They are a leveler;
- Conversation is the main activity;
- They are accessible;
- As a home away from home, they have 'regulars'; and
- The mood is playful

The lack of third places and the fragmentation of local communities have implications for democratic political involvement, the safety and security of communities and the overall quality of life of citizens.

Unfortunately, the vast suburban infrastructure, demanding work roles and consumer lifestyles of the post-industrial culture dramatically impede the development of third places. Without centralized 'town squares' or downtowns and with traditional neighborhoods abandoned for more private subdivision developments, third places are difficult to build and sustain. So some scholars point out virtual third space as a practical way for communication. In order to enhance the virtual third-place experience, the CMC participant should feel present or 'immersed' in the environment or virtual space. Ideally, the environment promotes 'the perceptual illusion of non mediation' via immersion (Riva, 1999). 'Virtual third place' offers a distinctive concept that better accounts for the unique characteristics of computer-mediated social interaction. More specifically, Douglas Schuler (1996) scrutinizes the similarities between third places and virtual communities. In his research, CMC contexts share key characteristics with Oldenburg's third places. Generally, CMC contexts such as third places emphasize conversation, humor and play, are on neutral ground, provide a home away from home and involve regular members. Primarily, computer mediated environments often emphasize playful conversation via informal talk (Schuler, 1996). In fact, Oldenburg's (1999) description of third places echoes the interaction typical of many classrooms and online discussion forums: 'Conversation's improved quality in the third place is also suggested by its temper. It is more spirited than elsewhere, less inhibited and more eagerly pursued'. As in online discourse, in discussions in third places 'consciousness of conditions and time often slip away amid its lively flow'. Based upon the detailed analysis of discourse online (Baym, 1995). Danet (2001) argues that the contemporary conditions of CMC such as interactivity and identity concealment promote a playful form of interaction. By masking their identity or using alternative personae, people feel less inhibited and online conversations are often highly spirited and lively. Thus, third places and CMC environments often share a comparable jocular, energetic and spirited conversational tone or mood. At contrast, for Turkle (1996), traditional third places differ from computer-mediated contexts in one important respect: the 'realness' of the interaction or dependence upon simulation. In particular, three key characteristics differ dramatically between traditional third places and social interaction online:

- (1) Third places emphasize localized community;
- (2) Third places are social levelers; and
- (3) Third places are accessible.

Oldenburg (1999) prominently and strongly advocates a return to geographically localized communities. He explicitly states 'the first and most



important function of third places is that of uniting the neighborhood'. As Doheny-Farina (1996) illustrates: 'a third place cannot exist separate from a locality because it exists only in comparison to its neighborhoods, to local work, play and family life, to the institutions and formal rituals that encompass daily life.

Also, Oldenburg found MUDs, Usenet conferences, mailing lists where conversation is the only activity and where characteristics such as non-hierarchy and playfulness are quite analogue to third places. These virtual places also have a high accessibility – always 'open', always crowded because of its global participants.

Postmodern theorists celebrate fragmentation because it allows the recognition of diversity in political desires acknowledges difference between individuals and debunks the myth of homogenous political units leading ultimately to liberation. They focus attention on the multiple, fragile, complex, fluid, and fragmented processes that compose individual identities (Laclau & Mouffe, 1987; Rosenau, 1992). There is, according to this view, no true self, and people do not exhibit personal characteristics. Rather, as Goffman (1959) pointed out some years ago, the self is constituted differently through a variety of "performances" in different times and places.

## XI. PROBLEMS

In spite of the optimism that are around the above assessments that focus largely on exploring potential use of the CSN as a free global space for social dialogue and international activism there are of course effective counter arguments that can be arranged in three main categories: (1) government limitations of use; (2) structural forces of capital organized either nationally or globally; and (3) the problems of fragmentation. Through communication processes are integral to their success (Atton, 2003; Downing, 2001), research shows that cyber activism experience several difficulties communicating through these networks. These networks often systematically distort, negatively cast or ignore social movement viewpoints. They may deny social movements access or representation at critical moments in their development (Raboy, 1981), employ message frames that undermine or weaken public perceptions of a movement's legitimacy (Gitlin, 1980; McLeod and Detenber, 1999; Shoemaker, 1982), or tacitly encourage cyber activism who seek coverage to cater to the questionable values of mainstream reportage on social activism, including a heightened interest in violence, emotionality and slogans (Kielbowicz & Scherer, 1986; Gamson, 1990; DeLuca and Peebles, 2002;). Some Pessimistic observers acknowledge the power and potential of the internet but caution against overestimating what it can do (Clark and Themudo, 2003). Pessimistic observers

look to a broader social context, arguing that the patterns of internet control suggest that the dominance by a handful of companies over much of the world's communication system is merely replicated on the internet, while suggesting that the internet in no way guarantees grass roots participation or more widespread democracy (McChesney, 1998). In terms of power, reliance on the internet may well privilege certain groups, languages, genders or countries to the exclusion of others (Clark and Themudo, 2003; Kole, 1998; Kramer and Kramarae, 1999). Surveillance is an increasing concern as some corporations are monitoring movement internet usage, and law enforcement, intelligence and other agencies are logging on to monitor social movements, actors and others that challenge the status quo (Coombs, 1998; Kahn and Kellner, 2004). For example the Chinese Government is reported to employ around 30,000 internet police to control the web so that it can be used by businesses and not by its political opponents (The Guardian, 2005). In addition, face-to-face connections remain important, and failing to focus on human contacts in favor of technology may mean diverting precious resources from other areas (Carlsson, 1995; Danitz & Strobel, 1999). For Castells (1996), the globalization of the capitalist system does not open up the possibility of a labor-led emancipatory project. Taking Castells' view, the fragmented nature of new media does limit the capacity of NSMs to create coherent strategies due to the increasing individualization of labour. Problems of quantity and chaos of information challenge the way analysis and action are integrated in decision-making processes as well as existing configurations of power and collective identity in social movement organizations. Furthermore, the internet may contribute to the fragmentation of civil society, as well as political mobilization and participation. Greater pluralism is regarded by Habermas as a risk for deliberative democracy rather than its savior. This concern is echoed by Sunstein (2001), Hill and Hughes (1998), who argues that the internet has spawned large numbers of radical websites and discussion groups allowing the public to bypass more moderate and balanced expressions of opinion in the mass media. Moreover, these sites tend to link only to sites that have similar views. Sunstein argues that a consequence of this is that we witness group polarization and this is likely to become more extreme with time. Sunstein contends that two preconditions for a well-functioning, deliberative democracy are threatened by the growth of the internet and the advent of multi-channel broadcasting. First, people should be exposed to materials that they have not chosen in advance. This results in a reconsideration of the issues and often recognition of the partial validity of opposing points of view. Second, people should have

a range of common experiences, in order that they may come to an understanding with respect to particular issues (Downey & Fenton, 2003). Sunstein(2001) also recognizes that 'group polarization helped fuel many movements of great value – including, for example, the civil rights movement, the antislavery movement, and the movement for sex equality'. In a same way as Atton (2004) notes: "To consider the internet as an unproblematic force for social change is to ignore the political and economic determinants that shape the technology; ...; and it is to ignore the obstacles to empowerment that legislation, inequalities of access, limits on media literacy and the real world situation of disempowerment necessarily place on groups and individuals. The danger in constructing global solidarity online, as Tarrow (1998) points out, is that the speed at which social movement actors can respond encourages a focus on short term and rapidly shifting issues rather than fully fledged ideologies. This easy-come-easy-go politics does not lend itself to long-standing commitments or deeply held loyalties, but rather to a following that is also fleeting and momentary and often lacking in political memory. Overall, in spite of all these problems, the CSNs have a great potential for establishing social movements seeking for their goals.

## XII. EFFECTS OF CSNS ON SOCIO-POLITICAL MOVEMENTS

It is obvious that CSNs would play a pivotal role, fundamental to the social movement's success. Protest activity and alliances of social movements on the ground can impact upon the way in which the internet is used and structured on the various and multiple websites. In other words interactivity is both between groups and between online and offline forms of organizing. Scholarship in this area has demonstrated that new technologies can reduce a state's capacity for repression and open up access to elite allies. For example, the Mexican Zapatistas used the high-speed global communication capacities afforded by the internet to coordinate with elite allies internationally and to exploit differences between their own government and that of the United States (Schulz, 1998). Scholars also suggest that the Internet can be used to avoid surveillance and to circumvent state regulation (Denning, 2001; Kidd, 2003; Scott & Street, 2000). Changes such as these alter activists' political opportunities, enhancing their ability to organize, mobilize, and influence elites (McAdam, 1996). Such as, the People's Global Action (PGA) organization, formed in 1998 by activists protesting in Geneva against the second Ministerial Conference of the WTO which is an attempt to create a worldwide alliance against neo-liberal globalization on an anti-capitalist platform. It is defined as 'an instrument for communication and

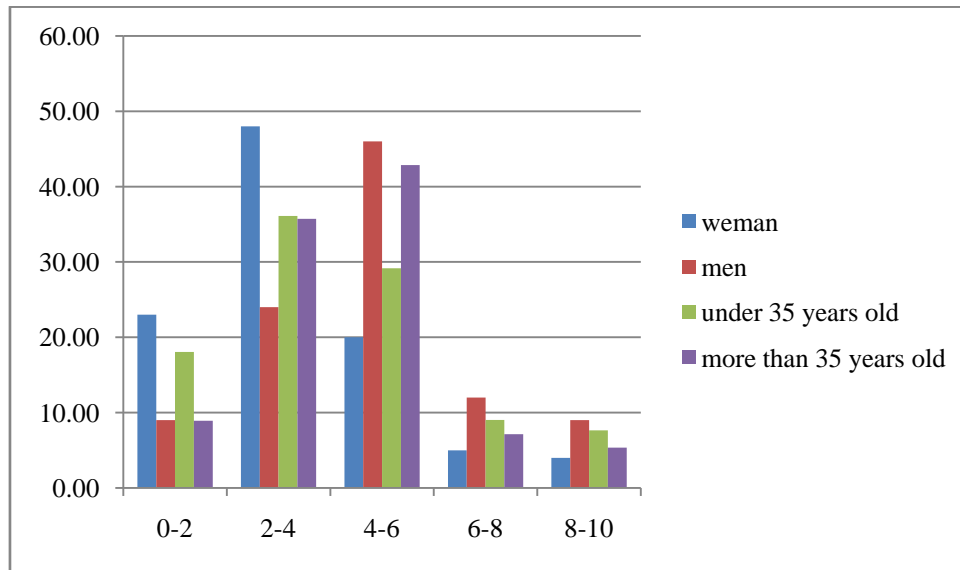
coordination for all those fighting against the destruction of humanity and the planet by capitalism, and for building alternatives' (www.agp.org, 2006). Furthermore, Ayres's (1999) depicts the internet as a mechanism facilitating the rapid circulation of unverifiable claims. Based on this characterization, he suggests that new technology may "indeed herald a return to old-fashioned collective behavior—the riots, panics and sporadic protests of old". One much quoted example is the anti-globalization movement that gained public recognition at what is now commonly referred to as 'The Battle of Seattle'. On 30 November 1999 an alliance of labor and environmental activists congregated in Seattle in an attempt to make it impossible for delegates to the World Trade Organization (WTO) conference to meet. They were joined by consumer advocates, anti capitalists and a variety of other grassroots movements. At the same time, it is claimed that nearly 1200 NGOs in 87 countries called for the wholesale reform of the WTO, many staging their own protests in their own countries (The Guardian Online, 1999). Groups integrated the internet into their strategies. The International Civil Society website provided hourly updates about the major demonstrations in Seattle to a network of almost 700 NGOs in some 80 countries (Norris, 2002). The demonstration was heralded as a success for transnational internet activism. Wall (2002) concludes that Seattle was not an anomaly, but rather the prototype for a global anti-corporate domination social movement that will increasingly rely on the Internet – for its benefit while also at its peril. While other media and even face-to-face organizing will remain vital, this new communication technology has and will continue to affect the face of social change in ways that we have yet to fully comprehend. Antiwar movement in London is another example. On 15 February 2003, about one million people took to the streets of London to protest against the imminent war with Iraq. It was followed on the third anniversary of the war, 18 March 2006; thousands once more lined the streets demanding an end to the occupation. These protests, and the multiple actions that have taken place in between, represent an upsurge in peace campaigning in Britain and worldwide. On the whole, we can conclude that CSNs, as were mentioned, have undeniable effects on social movements. Nowadays, social movements will increasingly rely on the Internet and virtual communities and moves toward cyber social movements. In the next section, we will study Tehran as a case study, and show why people have recently inclined to CSNs and how it helps them establish a powerful social movement.

## XIII. TEHRAN

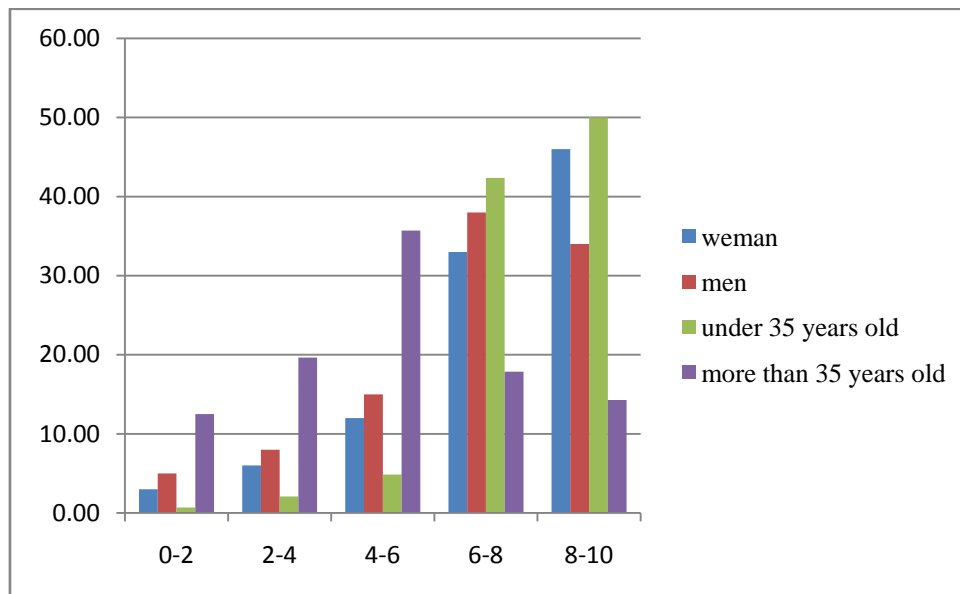
For clarifying the role of virtual space in Tehran, we made an interview with a group of people (includes

200 people, 100 males and 100 females, and 144 persons younger than 35 years old) about how much time they spend on urban space and virtual public space for social interaction. At first, we can see in bar chart (1 and 2), most of the women spend less than 6 hours per week for social interaction in urban spaces while this number for virtual spaces upsurge more than 8 hour a week. Women in Islamic society confront with some limitation for participating in social activities and it seems that they use the virtual space to break these

limitations and play an effective role in the society. Overall, all the people with different ages and sexes prefer virtual spaces rather than urban spaces. They indicated several reasons such as lack of appropriate public places in Tehran, government monitoring and limitations which were imposed by traditional society, especially for women. The bar chart2 shows that young people more than old ones and females more than males are interested in using cyber social networks.



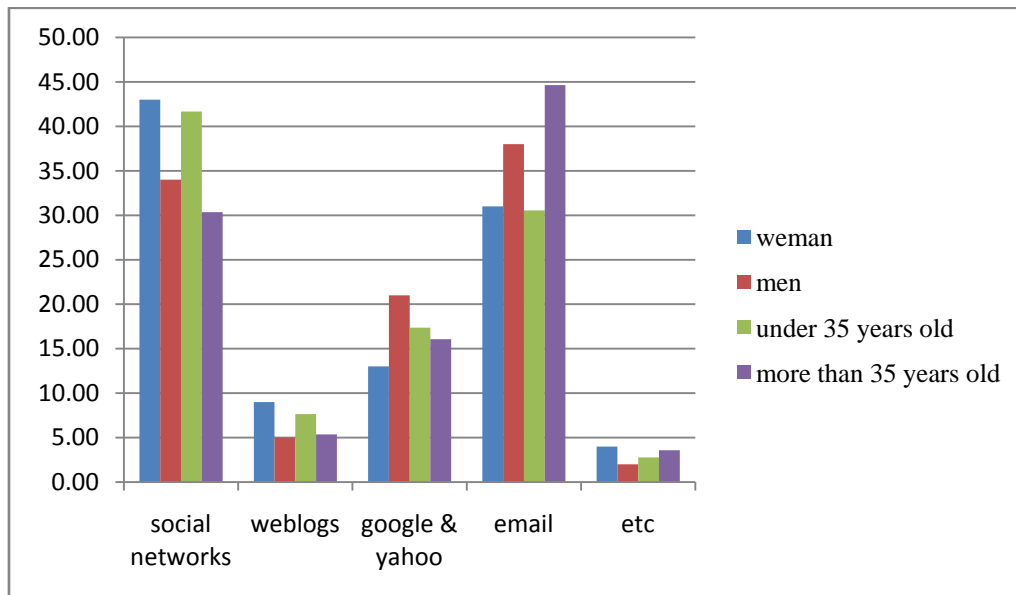
Bar chart 1. How much hour do people spend on urban spaces for interaction with others?



Bar chart 2. How much hour do people spend on cyber social networks for interaction with others?

When we asked the interviewees to determine by which way they often get their information and share them with others, they indicate social networks such as Facebook and Twitter in the first stage and email in the

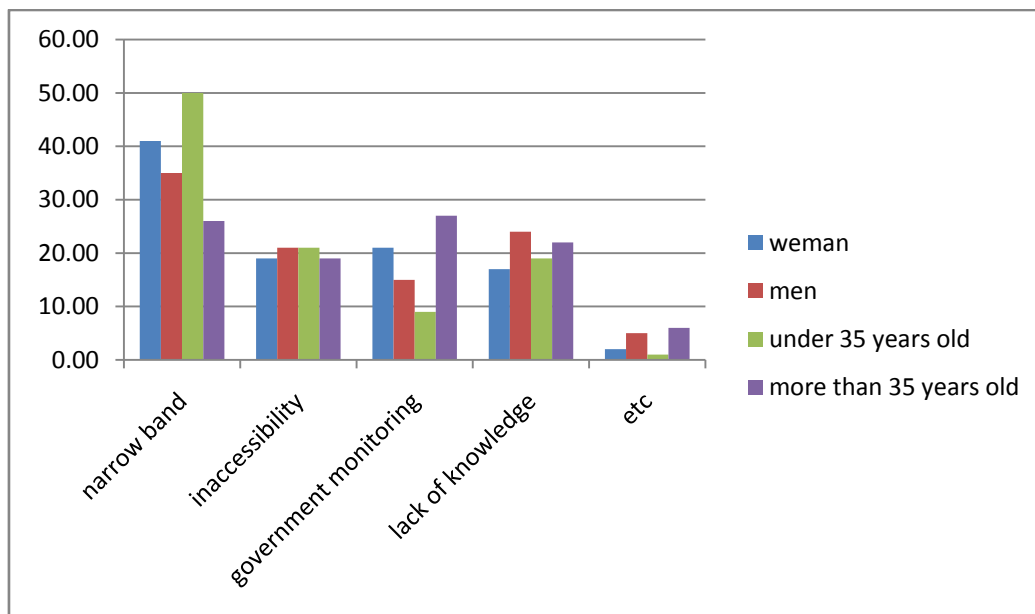
second one (bar chart 3). As it can be seen, women are more interested in cyber networks, while men prefer email and its accessories



Bar chart 3. Which ways do interviewees prefer for interaction through cyberspace?

The problems which internet users have to deal with are respectively, narrow internet band, inaccessibility for all and user's limit knowledge (bar chart 4). All users from different age and sex group have

the similar idea and the numbers only fluctuate slightly except for old people that have problem with complicated sites because of the lack of knowledge.



Bar chart 4. Which problems do make more difficulties for internet users?



In conclusion, we can summarize that in the absence of appropriate urban spaces in Tehran, people like using virtual spaces more and more, and people who were put into marginal areas in their society, are more keen on using cyber social networks.

#### XIV. COMMUNICATION THROUGH CYBER SOCIAL NETWORKS

Where real public places don't exist (Tehran), there is still social communication. Thanks to new technologies creating cyber social networks, absolute preventing human interactions has been impossible and social movements have bred their social interaction possibilities in an impressive virtual public place. Poster (1995) states, "When users have decentralized, distributed, direct control over when, what, why, and with whom they exchange information...it seems to breed critical thinking, activism, democracy and equality...This electronically mediated communication can challenge systems of domination" through offering an effective environment for presenting interests and messages of resistance identities. "Cyberspace is a new domain for social interaction and entertainment" (Wertheim, 1999).

Cyber social Networks such as Face Book, Twitter, You Tube, enable Tehran's users to construct their cyber identity and communicate with others in desired ways. "These networks are very flexible and the main bond between the various individuals and coalitions is that they maintain similar values and visions" (Smith, 2002). Such networks which were once used to make friendships as delightful spaces for Tehran's users gradually have changed into proper places for socio-political interactions and attracted various socio-political groups of human rights activists, journalists, reformists and so on who have been forbidden to activate throughout the city. These groups applied these networks to state their policies and thereby found a lot of advocates being communicated via the internet. "These online communities also launch e-mail campaigns and strategize to organize marches and teach-ins" (Nieves, 2003). One Million Signatures campaign for women's equality in Iran is a noticeable example of this networking. In such campaigns all members can activate and present their beliefs and ideas. They "have changed substantially what counts as activism, what counts as community, collective identity, democratic space, and political strategy. And online activists challenge us to think about how cyberspace is meant to be used" (McCaughey & Ayers, 2003) All protesting online organizations, cyber networks and E-campaigning were jointed and formed broad coalition in the cyberspace to seek their common political goals, a political cyber activism. "Cyberactivism crosses disciplines, mixes theories with practical activist

approaches ,and represents a broad range of online activist strategies, from online awareness campaigns to internet transmitted laser projected massaging"( McCaughey & Ayers, 2003). The combination of various activist approaches founded a great cause that Features by which these cyber public places assisted are:

##### 1) *Be Entertained to Attract Different People*

Connect with strangers in meaningful ways, as "weak-tie instrument' par excellence as such it is able to attract easily and rapidly a large number of people to join an action or event" (Kavada, 2006). It helps Iranian people from different race and religious, establish new interaction realm between strangers which were not possible in the past.

##### 2) *Sharing Experiences and Interests*

People share their interest and experience in Facebook and by which show to others what they believe and desire. In recent years, Facebook has become a place for transforming information and acts as a multilayer media which make a lot of people interact with each other and talk about what that is not possible to be discussed in governmental media.

##### 3) *Informing people about their various rights*

Through interacting in CSNs, Iranian people, especially women had been more familiar with their rights by comparing themselves to the overdeveloped countries.

##### 4) *Presenting Experiences in Visual Formats and Audio*

It helps them to inform other citizens about their experience in the society throughout different from what government has stated.

##### 5) *Offering a Place For Poll About Movement's Problems and Activities*

In the Facebook and Twitter, people were able to criticize their movements and its policy.

##### 6) *Enrolling in an Indefinite Rate*

Here, there are vast ranges of selections and everyone is able to identify himself or herself, based on his/her notion.

##### 7) *Flexibility And No Formal Or Complicated Membership*

For registering in a group, there is no need to use your real identity and so everyone can be a member without receiving any threat or danger from the state.

Therefore, these virtual spaces are the extension for physical public places in which people can express beliefs forbidden to state in the city. Virtual

spaces, alternative media and citizens' media were necessary tools in establishing a public sphere for dissenting views of protesters. According to Rodriguez (2001), "alternative media spin transformative processes that alter people's senses of self, their subjective positioning, and therefore their access to power" Considering about explanations, we can conclude protesting demands and beliefs which cannot be physically expressed in real forms, such as 'talk', 'face-to-face' due to the lack of public places, "are symbolically replaced in cyberspace by 'chat', 'chatting', 'e-mail' and 'posting'" (Hamman, 1999), eventually will materialize in urban spaces in form of protesting rallies. "Social movement organizations wanting to mobilize for a mass street demonstration make extensive use of the Internet to enhance coordination and mobilization efforts" (Van Laer, 2007).

## XV. CONCLUSION

New media can become the location for counter reflexive political deliberation and activity – but only if they embody democratic practice. The use of new communication technology to spread radical social critique and alternative culture is the realm of New Social Movements marked by fragmentation. Fragmentation has been variously interpreted as multiplicity and polycentrality when focusing on the potential for social agency and disaggregation and division when focusing on the potential for increased social control.

Computer networks can provide the means to create new 'virtual' places that offer functionally similar forms of localized informal interaction. These virtual third places should not be designed merely to reconstruct a hyper real image of a nostalgic small town embedded in our mediated collective memory. Further, these virtual third places should not be designed as 'futuristic' virtual realities created to realize fantastic visions from science fiction films and novels requiring elaborate equipment and sophisticated technical knowledge. Rather, virtual third places should be designed to fit into the participants' 'mundane' and 'ordinary' lived experiences. The virtual third place should feel like a place for the here and now, a place that is integrated seamlessly into the existing textures and details of our lived communal experiences. By emphasizing the unique demands of our unique communities, these virtual great good places can expand the participants' social world and further redefine how communication technology is integrated into everyday life. In order to strengthen social movement, cyber social networks and virtual third space should provide people with an environment in which they can collect and provide information, publicize them, have dialogue and make lateral linkages, Coordinate action and also are able to lobby decision-makers. Furthermore, they need a place to have a daily practice

about socio-political events and also they need a network leadership to help them have an effect on their movement decision. This place should be able to make a good connection between online and offline users and also connect its user and share the online experience with whom are not able to use internet.

There are several examples in which people established social movement by using net. In Tehran and other cities that there are no powerful urban places for interaction, cyber social networks can play a more effective role in social movement. In Tehran, people have used the CSNs increasingly and have organized their own NGOs and campaigns independent from the government. These CSNs act as a place for enrolling and informing them about their right and their abilities.

## REFERENCES RÉFÉRENCES REFERENCIAS

- 1) Association for Progressive Communications (APC) (2006) URL (consulted March 2006): <http://www.apc.org/english/about/index.shtml>.
- 2) Atton, C. (2003). Infoshops in the Shadow of the State, in N. Couldry and J. Curran, *Contesting Media Power: Alternative Media in a Networked World*, Lanham, MD: Rowman & Littlefield. pp. 57–69.
- 3) Atton, C. (2004). *An Alternative Internet: Radical Media, Politics and Creativity*. Edinburgh: Edinburgh University Press.
- 4) Ayres, J. (1999). From the Streets to the Internet: the Cyber-diffusion of Contention, *Annals of the American Academy of Political and Social Science* 566, pp. 132–43.
- 5) Barlow, W. (1988). Community Radio in the US: The Struggle for a Democratic Medium, *Media, Culture & Society*. 10(1). pp 81–105.
- 6) Baym, N. K. (1995). The emergence of community in computer-mediated communication. In S. G. Jones, *CyberSociety*. Thousand Oaks, CA: Sage. pp. 138–163.
- 7) Bennett, W.L. (2004). New Media Power: The Internet and Global Activism, in N. Couldry and J. Curran (eds) *Contesting Media Power: Alternative Media in a Networked World*. Lanham, MD: Rowman & Littlefield.
- 8) Benkler, Y. (2006). *The Wealth of Networks: How Social Production Transforms Markets and Freedom*. London: Yale University Press.
- 9) Bijker, W., & Law, J. D. (1992). *Shaping technology/building society: Studies in sociotechnical change*. Cambridge, MA: MIT Press.
- 10) Billig, M.(1995). *Banal Nationalism*. London Sage Publications.
- 11) Breslow, H. (1997). Civil Society, Political Economy and the Internet, in S. Jones (ed.)

- Virtual Culture: Identity and Communication in Cybersociety, Thousand Oaks, CA: Sage. pp. 236–57.
- 12) Carlsson, C. (1995). The Shape of Truth to Come: New Media and Knowledge, in G. Gerbner, H. Mowlana and H. Schiller, *Invisible Crises: What Conglomerate Control of Media Means for America and the World*, Boulder, CO: Westview Press, pp. 235–44.
  - 13) Castells, M. (1996). The Rise of the Network Society. Vol. 1 of the Information Age: Economy, Society and Culture. Oxford: Blackwell.
  - 14) Castells, M. (1997). The Rise of the Network Society. Oxford: Blackwell.
  - 15) Clark, J. & Themudo, N. (2003). The Age of Protest: Internet-based “Dot Causes” and the “Anti-Globalization” Movement, in J. Clark (ed.) *Globalizing Civic Engagement: Civil Society and Transnational Action*, London: Earthscan. pp. 109–26.
  - 16) Cleaver, H. (1998). The Zapatista Effect: The Internet and the Rise of an Alternative Political Fabric, *Journal of International Affairs* 51(2), pp 621–40.
  - 17) Coombs, W. T. (1998). The Internet as Potential Equalizer: New Leverage for Confronting Social Irresponsibility, *Public Relations Review* 24(3), pp 289–303.
  - 18) Costanza-Chock, S. (2003). Mapping the Repertoire of Electronic Contention, in A. Opel and D. Pompper, *Representing Resistance: Media, Civil Disobedience and the Global Justice Movement*, Westport, CT: Praeger. pp. 173–88.
  - 19) Danet, B. (2001). *Cyberpl@y: communicating online*. Oxford: Berg. Publishers, Chapter 6, about IRC art, also available online at the book's Companion Website, <http://atar.mscc.huji.ac.il/~msdanet/cyberpl@y/>.
  - 20) Danitz, T. & Strobel, W. P. (1999). The Internet's Impact on Activism: The Case of Burma, *Studies in Conflict and Terrorism* 22(3), pp 257–69.
  - 21) De Angelis, M. (2000). Globalization, New Internationalism and the Zapatistas. *Capital & Class* 70), pp 9–34.
  - 22) Della Porta, D. and M. Diani (2000). *Social Movements: An Introduction*. Malden, MA: Blackwell Publishers.
  - 23) DeLuca, K. & Peebles, J. (2002). From Public Sphere to Public Screen: Democracy, Activism and the Lessons of Seattle', *Critical Studies in Mass Communication* 19(2), pp. 125–51.
  - 24) Denning, D.E. (2001). Activism, Hactivism, and Cyberterrorism: The Internet as a Tool for Influencing Foreign Policy. in J. Arquilla and D. Ronfeldt *Networks and Netwars*, Santa Monica, CA: RAND National Defense Research Institute. pp. 239–88.
  - 25) Diani, M. (2001). Social Movement Networks. Virtual and Real. in F. Webster *Culture and Politics in the Information Age*, London: Routledge. pp. 117–27.
  - 26) Diani, M. and D. McAdam (2003). *Social Movements and Networks: Relational Approaches*.
  - 27) Doheny-Farina, S. (1996). *The wired neighborhood*. New Haven, CT: Yale University Press.
  - 28) Downing, J.D.H. (1989). Computers for Political Change: PeaceNet and Public Data Access, *Journal of Communication* 39(3): 154–62.
  - 29) Downing, J. D. H. (2001). *Radical Media: Rebellious Communication and Social Movements*. Thousand Oaks, CA: Sage.
  - 30) Downey, J. & Fenton, N. (2003). Constructing a Counter-Public Sphere, *New Media and Society* 5(2), pp 185–202.
  - 31) Drath, W. H. & Palus, C. J. (1994). *Making common sense: leadership as meaning-making in a community of practice*. Greensboro, N.C., Center for Creative Leadership.
  - 32) Drath, W. H. (2001). *The deep blue sea: Rethinking the source of leadership*. San Francisco: Jossey-Bass.
  - 33) Fenton, N. (2008). Mediating solidarity. *Global Media and Communication*. [http://gmc.sagepub.com/.\(4\).](http://gmc.sagepub.com/.(4).) 37.
  - 34) Fischer, C. S. (1992). *America calling: A social history of the telephone to 1940*. Berkeley: University of California Press.
  - 35) Fraser, N. (1993). Rethinking the Public Sphere: A Contribution to the Critique of Actually Existing Democracy, in H. Giroux and P. McLaren, *Between Borders: Pedagogy and the Politics of Cultural Studies*. New York: Routledge. pp. 74–100.
  - 36) Gamson, W. (1990). *The Strategy of Social Protest* (2nd edn). Belmont, CA: Wadsworth Publishing.
  - 37) Garrett, R. K. & Edwards, P. N. (2007). Revolutionary Secrets Technology's Role in the South African Anti-Apartheid Movement. *Social Science Computer Review*. Volume 25 (1). pp 13–26.
  - 38) Gerlach, L. (2001). The Structure of Social Movements: Environmental Activism and its Opponents, pp. 289–310 in D. Ronfeldt and J. Arquilla (eds) *Networks and Netwar: The Future*

- of Terror, Crime, and Militancy. Washington DC: RAND, National Security Research Division.
- 39) Gibson, R. & Ward, S. (2000). A proposed methodology for studying the function and effectiveness of party and candidate websites, *Social Science Computer Review*. 18(3), pp 301-319.
  - 40) Gitlin, T. (1980). *The Whole World Is Watching: Mass Media in the Making and Unmaking of the New Left*. Berkeley, CA: University of California Press.
  - 41) Goffman, E. (1959). *The Presentation of the Self in Everyday Life*. Garden City, New York: Doubleday. Anchor Books.
  - 42) *The Guardian*, 15 June 2005, p. 14.
  - 43) *The Guardian Online*, 25 November 1999, p. 4.
  - 44) Habermas, J. (1989). *The Structural Transformation of the Public Sphere: An Inquiry into a Category of Bourgeois Society*. Cambridge: Polity.
  - 45) Hamman, R. (1999). Computer networks linking communities: A study on the effects of computer network use upon pre-existing communities. *Virtuelle Gruppen - Charakteristika und Problem dimensionen*. Germany: Wiesbaden: Westdeutscher Verlag.
  - 46) Hardt, M. and A. Negri. (2004). *Multitude: War and Democracy in the Age of Empire*. New York: Penguin.
  - 47) Hill, K. & Hughes, J. (1998). *Cyberpolitics: Citizen Activism in the Age of the Internet*. Lanham, MD: Rowman & Littlefield.
  - 48) Hobsbawm, E. & Ranger, T. (1983). *The Invention of Tradition*. Cambridge: Cambridge University Press.
  - 49) Jenkin, T. (1995). Talking to Vula: The story of the secret underground communications network of Operation Vula (published in 6 parts) [Electronic version]. Mayibuye: Journal of the African National Congress, 6(1-6). Retrieved March 1, 2006, from <http://www.anc.org.za/ancdocs/history/vulva.html>
  - 50) Kahn, R. & Kellner, D. (2004). New Media and Internet Activism: From the "Battle of Seattle" to Blogging, *New Media & Society* 6(1), pp 87-95.
  - 51) Kavada, A. (2005). Civil Society Organizations and the Internet, The Case of Amnesty International, Oxfam and the World Development Movement, in Wilma de Jong, Martin Shaw and Neil Stammers, *Global Activism, Global Media*, London: Pluto. pp. 208-23.
  - 52) Kavada, A. (2006). The 'alter-globalization movement' and the Internet: A case study of communication networks and collective action. Cortona Colloquium: Cultural Conflicts, Social Movements and New Rights, A European Challenge.
  - 53) Keck, M.E. and K. Sikkink (1998) *Activists Beyond Borders: Advocacy Networks in International Politics*. Ithaca, NY: Cornell University Press.
  - 54) Kessler, L. (1984). *The Dissident Press: Alternative Journalism in American History*. Newbury Park, CA: Sage.
  - 55) Kidd, D. (2003). *Indymedia.org: A new communications commons*. In M. McCaughey & M. D. Ayers, *Cyberactivism: Online activism in theory and practice*. New York: Routledge. pp. 47-69.
  - 56) Kielbowicz, R.B. & Scherer, C. (1986). The Role of the Press in the Dynamics of Social Movements, in L. Kriesberg, *Research in Social Movements, Conflicts and Change*, Greenwich, CT: JAI Press. pp. 71-96.
  - 57) Klein, N. (2000) *No Logo*. New York: Flamingo.
  - 58) Podolny, J.M. and K. L. Page (1998). Networks Form of Organization, *Annual Review of Sociology* 24(1): 57-76.
  - 59) Postmes, T. & S. Brunsting (2002). Collective Action in the Age of the Internet: Mass Communication and Online Mobilization, *Social Science Computer Review* 20(3), pp 290-301.
  - 60) Klein, N. (2000) *No Logo*. New York: Flamingo.
  - 61) Kole, E.S. (1998). Myths and Realities in Internet Discourse: Using Computer Networks for Data Collection and the Beijing Conference on Women, *Gazette* 60(4), pp 343-60.
  - 62) Kramer, J. & Kramarae, C. (1999). Women's Political Webs: Global Electronic Networks', in A. Sreberny and L. van Zoonen (eds) *Gender, Politics and Communication*, Cresskill, NJ: Hampton Press. pp. 205-22.
  - 63) Laclau, E. & Mouffe, C. (1985). *Hegemony and Socialist Strategy; Toward a Radical Democratic Politics*. New York: Verso.
  - 64) Landauer, T. K. (1999). *The trouble with computers: Usefulness, usability, and productivity* (1st paperback ed.). Cambridge, MA: MIT Press.
  - 65) McAdam, D. (1996). Conceptual origins, current problems, future directions. In D. McAdam, J. D. McCarthy, & M. N. Zald, *Comparative perspectives on social movements: Political opportunities, mobilizing structures, and cultural framings*. New York: Cambridge University Press. pp. 23-40.
  - 66) McCaughey, M. & Ayers, M. (2003). *Cyberactivism: online activism in theory and practice*. Routledge.



- 67) McChesney, R. (1998). Media Convergence and Globalization', in D.K.Thussu, *Electronic Empires: Global Media and Local Resistance*. London: Arnold. pp. 27–46.
- 68) McGonagill, G. & Reinelt, C. (2010). Supporting Leadership Development in the Social Sector: How Foundations Can Make Strategic Investments.
- 69) McLeod, D.M. and Detenber, B.H. (1999). Framing Effects of Television News Coverage of Social Protest, *Journal of Communication* 49(3), pp. 3–23.
- 70) Melucci, A. (1989). *Nomads of the Present: Social Movements and Individual Needs in Contemporary Society*. Philadelphia, PA: Temple University Press.
- 71) Melucci, A. (1996). *The Playing Self*. Cambridge: Cambridge University Press.
- 72) Mueller, M., B. Kuerbis and C. Pagé (2004). Reinventing Media Activism: Public Interest Advocacy in the Making of US Communication-Information Policy, 1960–2002, Ford Foundation report, URL (consulted June 2006): <http://dcc.syr.edu/ford/rma/reinventing.pdf>
- 73) Nieves, E. (2003). Antiwar Groups Say Public Ire Over Iraq Claims Is Increasing. *The Washington Post*, A03.
- 74) Norris, P. (2002). *Democratic Phoenix: Reinventing Political Activism*. Cambridge: Cambridge University Press.
- 75) Oldenburg, R. (1999). *The Great Good Place: Cafes, Coffee Shops, Community Centers, Beauty Parlors, General Stores, Bars, Hangouts, and How They Get You Through The Day*. New York: Marlowe & Company.
- 76) Pickard, V. W. (2006). United yet autonomous: Indymedia and the struggle to sustain a radical democratic network. *Media, Culture & Society*. (28). pp 315.
- 77) Poster, M. (1995). *Second media age*. Cambridge: Polity Press.
- 78) Postmes, T. and S. Brunsting (2002). Collective Action in the Age of the Internet: Mass Communication and Online Mobilization, *Social Science Computer Review* 20(3), pp 290–301.
- 79) Raboy, M. (1981). *Media Alternatives and Social Movements: Quebec 1960–1980*, McGill University Graduate Communications Program Working Paper Series.
- 80) Redden, G. (2001). *Networking Dissent: The Internet and the Anti-globalisation Movement*, Mots Pluriels 18. URL (consulted November 2005): <http://www.arts.uwa.edu.au/MotsPluriels/MP1801gr.html>
- 81) Rheingold, H. (1993). *The Virtual Community: Homesteading on the Electronic Frontier*. Reading, MA: Addison-Wesley.
- 82) Rheingold, H. (2002) *Smart Mobs: The Next Social Revolution*. Cambridge, MA: Perseus Publishing.
- 83) Riva, G. (1999). Virtual reality as communication tool: a sociocognitive analysis. *Presence – Teleoperators and Virtual Environments* 8(4), pp. 462–468.
- 84) Rodriguez, C. (2001). *Fissures in the mediascape: An international study of citizens' media*. Cresskill, NJ: Hampton Press.
- 85) Ronfeldt, D. and J. Arquilla (2001). What's Next for Networks and Netwars?. Ronfeldt and J. Arquilla (eds) *Networks and Netwars: The Future of Terror, Crime, and Militancy*. Washington, DC: RAND, National Security Research Division. D, pp. 311–61.
- 86) Rosenau, J. N. (1992). Governance, Order, and Change in World Politics. In *Governance without Government: Order and Change in World Politics*, edited by James N. Rosenau and Ernst Otto Czempiel. Cambridge: Cambridge University Press.
- 87) Salter, L. (2003) 'Democracy, New Social Movements and the Internet: A Habermasian Analysis', in M. McCaughey and M.D. Ayers (eds) *Cyberactivism: Online Activism in Theory and Practice*. London: Routledge.
- 88) Schuler, Douglas. (1996). *New Community Networks: Wired for Change*. New York: ACM Press.
- 89) Schulz, M. S. (1998). Collective action across borders: Opportunity structures, network capacities, and communicative praxis in the age of advanced globalization. *Sociological Perspectives*, (41), pp 587-616.
- 90) Scott, A., & Street, J. (2000). From media politics to e-protest. *Information, Communication and Society*, (3), pp. 215-240.
- 91) Shoemaker, P.J. (1982). The Perceived Legitimacy of Deviant Political Groups: Two Experiments on Media Effects, *Communication Research*, 9(2), pp. 249–86.
- 92) Smith, P.J. and Smythe, E. (2001a). *Sleepless in Seattle: Challenging the WTO in a Globalizing World*, paper presented at the 42nd International Studies Association Conference, Chicago, IL, pp 20–24.
- 93) Smith, P.J. and Smythe, E. (2001b). Globalization, Citizenship and Technology: The Multilateral Agreement on Investment (MAI) Meets the Internet, in F. Webster (ed.) *Culture and Politics in the Information Age: New Politics?*, New York: Routledge. pp. 183–206.



- 94) Smith, J. (2002). Bridging Global Divide? Strategic Framing and Solidarity in Transnational Social Movement Organizations, *International Sociology*, 17-4: pp. 505-528.
- 95) Soja, E. (1996). *Thirdspace*, Oxford & Malden, MA: Blackwell.
- 96) Stein, L. (2009). Social movement web use in theory and practice: a content analysis of US movement websites. *New Media & Society*. (11). pp 749.
- 97) Steiner, L. (1992). The History and Structure of Women's Alternative Media, in L.F. Rakow, *Women Making Meaning: New Feminist Directions in Communication*, New York: Routledge. pp. 121-43.
- 98) Sunstein, C. (2001). *Republic.com*. Princeton, NJ: Princeton University Press.
- 99) Tarrow, S. (1998). *Power in Movement – Social Movements and Contentious Politics*. Cambridge: Cambridge University Press.
- 100) Tarrow, S. (2005). *Power in Movement: Social Movements and Contentious Politics*. Cambridge, MA: Cambridge University Press. (2). pp 113.
- 101) Taylor, V. and Whittier, N. E. (1992). Collective Identity in Social Movement Communities: Lesbian Feminist Mobilization, in A.D. Morris and C. McClurg, *Frontiers in Social Movement Theory*, pp. 104-29. New Haven, CT: Yale University Press.
- 102) Turkle, S. (1995). *Life on the Screen: Identity in the Age of the Internet*. Simon & Schuster New York.
- 103) Wall, M. (2002). The Battle in Seattle: How Non-Governmental Organizations Used Websites in their Challenge to the WTO, in E. Gilboa, *Media and Conflict: Framing Issues, Making Policy and Shaping Opinions*. Ardsley, NY: Transnational Publishers.
- 104) Van Aelst, P. (2002). *New Media, New Movements? The Role of the Internet in Shaping the Anti-Globalization Movement*, paper presented at the 98th American Political Science Association Conference, Boston, MA, 28-30 August, URL (consulted 1 January 2003): <http://apsaproceedings.cup.org/Site/papers.040/040005VanAelstPe.pdf>
- 105) Van der Donk, W., Loader, B.D., Nixon, P.G. and Rucht, D. (2004). *Cyberprotest: New Media, Citizens and Social Movements*. London: Routledge.
- 106) Van Aelst, P. and S. Walgrave (2002). *New Media, New Movements? The Role of the Internet in Shaping the "Anti-Globalization" Movement, Information, Communication and Society* 5(4), pp 465-93.
- 107) Van Laer, J. (2007). Internet Use and Protest Participation: How do ICTs affect mobilization? *PSW Papers, Politieke Wetenschappen*, 1, pp. 1-24.
- 108) Warkentin, C. (2001). *Reshaping World Politics: NGOs, the Internet, and Global Civil Society*. Lanham, MD: Rowman and Littlefield.
- 109) Wertheim, M. (1999). *The Pearly Gates of Cyberspace: A History of Space from Dante to the Internet*. Sydney: Doubleday.
- 110) Wodak, R. de Cillia, R., Reisigl, M., and Liebhart, K. (1999). *The Discursive Construction of National identity* (A. Hirsch & R. Mitten, Trans.). Edinburgh: Edinburgh University Press.





This page is intentionally left blank



GLOBAL JOURNAL OF HUMAN SOCIAL SCIENCE  
Volume 11 Issue 1 Version 1.0 February 2011  
Type: Double Blind Peer Reviewed International Research Journal  
Publisher: Global Journals Inc. (USA)  
ISSN: 0975-587X

# Package for Controlling Street Begging and Rehabilitating Beggars and the Physically Challenged in Nigeria: Paper for Policy Consideration

By Adedibu, A.A., Jelili, M.O.

*Ladoke Akintola University of Technology, Ogbomosho, Nigeria.*

**Abstract-** Against the background of the ineffectiveness of most of the efforts of governments aimed at checkmating the problem of begging in Nigerian cities and the recognition of the unholistic nature of such efforts, this paper explores different aspects and correlates of begging and use same to identify a comprehensive control package. The study, which covers Kano, Ibadan and Enugu as representatives of their respective geographical regions, makes use of data on: (1) Incidence of begging, which were obtained through beggars count; (2) Physical, socio-cultural and other characteristics of beggars obtained through observation and questionnaire administration; and (3) People's socio-cultural characteristics and perception of begging obtained also through questionnaire administration. It identifies the urbanization, land use and socio-cultural correlates of begging. It also identifies the potentials in different categories of beggars and the need to get same enhanced. With recourse to different aspects of the study, a comprehensive package covering such issues as physical planning, socio-economic, religious, legal and other control measures are recommended for consideration.

**Keywords:** *Begging Syndrome, Disability, Socio-Cultural Question, Physical Planning and Other Controls.*

**Classification:** *GJHSS-A Classification (FOR): 170109*



*Strictly as per the compliance and regulations of:*



# Package for Controlling Street Begging and Rehabilitating Beggars and the Physically Challenged in Nigeria: Paper for Policy Consideration

Adedibu, A.A., Jelili, M.O.

February 2011

17

**Abstract-** Against the background of the ineffectiveness of most of the efforts of governments aimed at checkmating the problem of begging in Nigerian cities and the recognition of the unholistic nature of such efforts, this paper explores different aspects and correlates of begging and use same to identify a comprehensive control package. The study, which covers Kano, Ibadan and Enugu as representatives of their respective geographical regions, makes use of data on: (1) Incidence of begging, which were obtained through beggars count; (2) Physical, socio-cultural and other characteristics of beggars obtained through observation and questionnaire administration; and (3) People's socio-cultural characteristics and perception of begging obtained also through questionnaire administration. It identifies the urbanization, land use and socio-cultural correlates of begging. It also identifies the potentials in different categories of beggars and the need to get same enhanced. With recourse to different aspects of the study, a comprehensive package covering such issues as physical planning, socio-economic, religious, legal and other control measures are recommended for consideration.

**Key Words:** *Begging Syndrome, Disability, Socio-Cultural Question, Physical Planning and Other Controls.*

## 1. INTRODUCTION

If the Millennium Development Goal number one (eradication of extreme poverty and hunger) is to be achieved in Nigeria, the problem of increasing incidence of begging in her cities needs be properly addressed (Jelili, 2009). This is because apart from the fact that street begging constitutes nuisance to the physical and social environment of Nigerian cities, the continuing reliance on the activity as a means of livelihood, amount to a waste of human resources, and a burden on the already overstretched meager-income earners of the majority of the work force. However, as different tiers of government introduce at different times of their administrations, measures against poverty and at times, destitution, the problem continues unabated.

This is because, more often than not, the beneficiaries of most of these 'kind gestures' are rich or middle-income people, who rather than acting as middle-men, constitute the main drains, and in most cases, direct beneficiaries of the gestures and goodies found in different programmes or schemes aimed at improving the lot of the poor people. Thus poverty persists. It is in the name of this solution-defying poverty that most vulnerable groups get engaged in street-begging, which become more pronounced in every major street of Nigerian cities (Adedibu, 1989; Osagbemi, 2001), as a result of the joining of the seemingly lucrative occupation by different other categories of street persons, most of whom join the 'occupation' for different reasons. While some see it as a permanent business, others see it as a temporary measure of escaping the contingent poverty conditions. Some others take to begging as a way of disguising and diverting away the attention of the nearby people from all forms of evil they may wish to perpetrate.

Regardless of the reasons for which begging is taken to, the state of anomie of the city allows the beggar (of whatever category) to remain shameless, unidentifiable and 'faceless'. This attribute of facelessness resulting from the population thickness and heterogeneity of the city makes it difficult for the power that be and other concerned parties to get the urban street cleansed of beggars. It is no sooner that some of the state governments in the federation evacuate the beggars from the city than they re-appear (Ojo, 2005). While the current exercise of Lagos State Government in evacuating beggars from the mega-city is considered fruitful by many, it is believed here that the approach is not in any way positive. This is because the forceful evacuation only 'shifts' or 're-distributes' the activity among Nigerian cities, but never addresses the reasons why they take to begging and most importantly, what to be done to get them leave the street. More so, most of the forcefully evacuated beggars tend to resurface there when the policy is relaxed a bit as shown

*About-Ladoke Akintola University of Technology, Ogbomoso, Nigeria.  
E-Mail-jelmusi@yahoo.com, afolabiadedibu@yahoo.com*

Volume XI Issue I Version I

Global Journal of Human Social Science

by the experience of Chinese cities. In this paper a comprehensive package of diverse measures of begging control is presented. The paper which emanates from an intensive and extensive study of the phenomenon in cities of different parts of the country (Jelili, 2009) shall provide the summary of the findings on different aspects of the problem (including its urbanization, land use and socio-cultural correlates) as background information.

## II. METHODOLOGY

Three categories of data were used in this study. These include: (1) Incidence of begging, which were obtained through beggars count; (2) Physical, socio-cultural and other characteristics of beggars obtained through observation and questionnaire administration; and (3) People's socio-cultural characteristics and perception of begging obtained also through questionnaire administration.

The first category of data was obtained through beggars' census at selected major land use areas of each city. The second category was obtained through questionnaire administration on 597 randomly selected beggars (264, 212 and 121 from Kano, Ibadan and Enugu respectively) either directly with them or through people that know them or both. The third category was obtained also through questionnaire administration to members of the public selected using systematic random sampling. The data on incidence of begging was summarized using frequency count, and subjected to a two-way analysis of variance to test how it varies from one land use area to another, and from city to city. Data on characteristics of beggars was factor-analyzed to evolve a pattern of types of beggars. Data on the socio-economic characteristics of the members of the public, on the other hand, was subjected to Principal Components Analysis to identify some dimensions which were used as independent variables that were regressed with relative incidence of begging.

## III. BEGGING IN NIGERIAN CITIES: AN OVERVIEW OF THE EXISTING SITUATIONS AND THEIR PLANNING/POLICY IMPLICATIONS

Problem of begging is not peculiar to any part of the country. It is an urban problem noticeable in every urban centre of the country. However, the problem of begging is significantly higher in one part of the country than in the other. In Kano, for instance about seven times the incidence of begging in Ibadan was observed, while that of Enugu was observed to be one third that of Ibadan. This may be indicating the fact that: (1) the more urban a town or city in Nigeria the higher the potential beggars attracted to or generated by it, all

things being equal. The planning implication of this is that as more urban centres spring up while the existing ones grow bigger there needs to be adequate urban development management techniques capable of checkmating the negative implications of increasing urban growth, including begging. (2) Begging is a culture more accommodated in the northern part of the country, less accommodated but less frowned at in the West but regarded as a taboo in the East, (3) the observed (though low) incidence of begging in the East is not unconnected with the heterogeneity of the city which promotes cultural diffusion and/or infusion that characterizes the complexities of most Nigerian cities, especially in the South. Such complexities are reflected in the disorderly arrangement of land uses or activities in cities; making some major land uses abodes of negative and/or undesirable activities, including begging. This study has observed that such land uses as religious centres (mosques and churches), motor-parks, filling stations, markets and main junctions, among others are important generators and attractors of beggars. It has more importantly noted that while all the land uses are important beggars' zones, motor parks takes the lion share of 52.63% of the total beggars identified. This is followed by markets and mosques in that descending order. Across the city however, the study observes that while central mosque is the largest attractors of beggars in Ibadan, it is third largest in Kano, and least generator of beggars in Enugu; but markets are good attractors of beggars in virtually all the cities, especially in Kano and Enugu. The pattern above is a pointer to the fact that while factor of uncontrolled urbanization is a common denominator affecting begging in the three cities, that of culture plays a significant role in the different incidences of begging observed in Kano and Enugu in different ways. While it promotes begging in Kano, it discourages it in Enugu. Factor of religion, on the other hand, is a strong factor affecting begging in Ibadan and Kano, all things being equal. Issues pertaining to culture and religion are however summarized in a better form later. On the factor of urbanization and /or land uses however, the study has observed that incidence of begging varies significantly with location/ land use and city. The planning implication of the above is that unless certain areas or land uses are properly planned and maintained to provide less convenient spots for street persons of different kinds, it would be difficult to eliminate begging. Besides, varying intensities of efforts should be made to tackle problem of begging in cities depending on the magnitude of the problem. For specific actions or measures within cities however, it is observed that while beggars are ubiquitous in Kano, they concentrate along a loop of Okpara Avenue through Ogui road and Ogbete main market at the centre of Enugu; and constitute clusters of 'secondary land use' around



mosques and motor parks of central areas in Ibadan. Arising from the above, it is inferred that:

- a) Less organized land use activities, particularly motor parks and markets where vehicles are parked and informal sector activities located indiscriminately provide convenient spots for beggars
- b) Less managed popular junctions are easy targets of beggars
- c) Religious land use especially, mosques usually breed or accommodate beggars, especially in Ibadan and Kano. More so, Religious land uses, especially churches are occasional attractors of beggars in the three cities, as begging activity is found around such land uses only when services are on and worshippers are around.
- d) Inadequate or less planned transport facilities like bad road, poor intersections, poor parking lots and their associated traffic jam, attract different categories of beggars. On the question of who are beggars, and whether they have similar characteristics, as observed by Adedibu (1989) among other scholars, the study observes that out of the ten socio-economic variables examined only age, education and tribe vary significantly from city to city. Other socio-economic characteristics of beggars like gender, income, marital status, religion and being engaged before taking to begging are observed to remain about the same for the three cities. This is a pointer to the fact that most of the beggars have similar background, confirming the finding here that majority (62.5%) of them are of the same extraction (Hausa of the north). The planning or policy implication of the above is that begging in city is significantly influenced by uncontrolled inter-city, inter-state or inter-regional migration, which has resulted into having in virtually every Nigerian city a considerable proportion of beggars as Northerners.

Specifically, however, the study observes that there are more male beggars than female ones. Most of them are married while a considerable proportion is widows/widowers, which is an indication of poverty factor affecting those beggars who have lost their spouses especially women. With a clear difference, most (82.6%) of the beggars are Muslim while majority (62.5%) are Hausa. This is in agreement with the view of Jibril (1997) that most of those who engage in begging are Muslim and from the Northern part of the country. They (beggars) make an average income of about N690 per day, an income that is far more than the minimum wage in the civil service. This is attesting to the finding that most (68.8%) of the beggars belong to the work-force age-group (20-59yrs), a situation that may be

connected to the problem of joblessness, which has resulted into various forms of begging including area-boys type, and criminals in beggar's outlook. Most (75.3%) of them have no formal education. On the physical characteristics of beggars, the study observes that while some of the beggars have such physical handicaps as blindness, wounds, hand, arms or leg handicaps and mental problem, a considerable proportion are with no form of physical disability. Without prejudice to the dichotomy of with and without physical disabilities of beggars, it is discovered that 64.6% of them are without relations in the city; but nearly all (94.8%) of them are resident in the city where they beg, thereby constituting a serious nuisance to the city, especially the Almajiris of the north that roam about the streets aimlessly in the name of Koranic education. The policy implication of the above is that different rehabilitation and control measures should be put in place for different categories of beggars, depending on the nature of predicament of each. For example, while poverty reduction strategies may be appropriate for most able-bodied, occasional beggars, functional and effective rehabilitation services may be appropriate for disabled ones. The Almajiri of the north, however, requires much more than rehabilitation but also, and more importantly a revitalization and reorganization of the Koranic education as well as reorientation. For the area boys types of the West and East poverty alleviation and legal control measure may be appropriate. If such measures can be well implemented nearly all of them can be made to stop begging; as also indicated only a negligible proportion (1.1%) of the beggars feel that no condition can stop them from begging. As an indirect way of identifying beggars' potentials that could be enhanced and incorporated into rehabilitation schemes, considerable proportions of beggars have indicated their ability to dance (24%) to play ludo (6.4%) to play trumpet/guitar (0.9%), to sing (51.4%), to perform track event (4.3%) and to be involved in other games. All these which do not vary significantly from city to city are vital issues that could make rehabilitation schemes sustainable as revealed later in this study. On the issue of which type of beggars is more prevalent at where, the study has identified six statistically derived types of beggars, including: (1) destitute and jobless beggars (2) disguised occasional/unprofessional beggars (3) wanderers and professional beggars (4) unskilled, uncatered for female beggars (5) criminals in disguise and (6) old age beggars. The study unveils that distribution of such beggar types varies with location in each city. By relating the composite socio-cultural variable to incidence of begging, the study discovers that in an average Nigerian city only 31% of the propensity to generate or attract beggars may be attributed to the socio cultural background of the city. This, as indicated in the results of Principal Components

variant of Factor Analysis is defined majorly by religion, though perceptions on presence of beggars and acceptability of begging and legislation against begging also varies with other socio-cultural variables like income and tribe. The remaining proportion is perhaps attributed partly to the problem of poverty and/or destitution, partly to the poor planning of urban fabric and partly to uncontrolled intercity (or inter-regional) migration. All these are issues of urban development policy concerns. Summarily, however, the study, through literature search and field surveys, has found that most of the measures adopted at one time or the other by different governments or their agencies have failed to yield the desired result, which is eradication of street-begging or drastic reduction in incidence of begging. Rather incidence of begging in streets of Nigerian cities keeps increasing, a problem that has been attributed to less coordinated, incomprehensive, inconsistent, unholistic approaches and less focused attempts at addressing the issue. The following sets of recommendations are an embodiment of several dimensions to addressing the problem of begging in Nigerian cities of diverse socio-cultural background and similar urbanization correlates as revealed from the findings of this study.

#### IV. MEASURES FOR CONTROLLING BEGGING IN NIGERIAN CITIES

Measures for controlling begging in Nigerian cities are multi-faceted, just like factors affecting begging and begging itself are multi-dimensional. Arising from the above, such measures have been observed to include: (1) socio-economic strategies, (2) physical planning control measures, (3) religious control measures and (4) legal control measures (Jelili, 2009). All these are recommended below based on findings of the study.

#### V. SOCIO-ECONOMIC STRATEGIES FOR CONTROLLING BEGGING IN NIGERIAN CITIES

There is no gain saying the fact that the socio-economic maladies in our country are some of the chief factors that provide fermentation for nurturing begging. (Jibril, 1997) Socio-economic strategies for controlling begging can be categorized into two: (1) Poverty alleviation programmes that would have direct bearing on beggars and different categories of the needy; (2) Sustainable and effective rehabilitation schemes. The former will be aimed at reducing begging engaged in by the poverty ridden able-bodied people especially uncatered-for women, while the latter shall target beggars of one form of disability or the other. The poverty alleviation programme that can address the

problem of begging in Kano and perhaps other northern cities will be that which address the following areas:

- a) There is need to define the position of the Quranic Education System in the education sector of the northern states. This is in line with one of the issues raised in the communiqué at the end of the 3-day National Conference on Begging and Destitution held in Kaduna in September 5-7, 1997.
- b) Registration and formalization of such Arabic schools
- c) There is need to identify and define who are stakeholders and what are their roles.
- d) Such poverty alleviation programme should include who pays the mallam (tutors) and how much, and who takes care of the feeding of the students (almajiris). Unless this problem is addressed we cannot get rid of almajiris in the streets of the northern cities.

Such aspect of the general poverty alleviation program, which is recommended for the northern states, should assign defined responsibilities to the parents of such Arabic students, the local government and the state government as stakeholders. Another form of poverty alleviation program that can reduce begging in virtually every Nigerian city including Kano, Ibadan and Enugu, is that which targets and has direct bearing on the informal sector of the city economy. This is because most people who beg as a result of poverty, as revealed in the findings here, are operators of the informal sector economy especially women, who look for quick way of survival when unforeseen economic hardship strikes and refuse to return to their original occupation. This could be achieved by:

- a) Earmarking certain percentage of the local and state government budgets for informal sector of the economy.
- b) Building markets and making shops available at controlled affordable prices for market men and women.
- c) Making loans readily available and disbursable to the operators of informal sector businesses and service industries at considerably low interest rate
- d) Priority consideration should be given (on the two items above) to the known beggars willing to participate in the informal sector businesses.
- e) A committee should be put in place at both local and state levels to see to the implementation of such a poverty alleviation programme.
- f) Cooperative societies, micro-finance banks and similar organizations should be encouraged by government to contribute in their own capacities by effectively implementing similar poverty alleviation programmes in their services. Such

would be carried out by stipulating that certain percentage of their lending should be directed at informal sector of the economy, and their activities should be well monitored by relevant agency, department or ministry to ensure compliance.

Other aspect of socio-economic measure against begging is rehabilitation. Drawing from the experience of the past rehabilitation schemes, some of which were abandoned halfway, why some could not function as a result of grossly inadequate facilities, this study presents a comprehensive and sustainable rehabilitation measure. In each of the local government areas of the city, there is need for establishment of vocational rehabilitation centre (VRTC) to address the problem of those with one form of disability or the other, and prevent them from becoming beggars, or stop them from remaining as beggars. The VRTC, which may be similar in terms of department and activities but may not be so in terms of size for Ibadan and Enugu is described below with respect to such aspects as organization and socio-economic sustainability. For Kano, however, there should be an additional department for Koranic education to encourage the potential users. The size may not, however be bigger than that of Ibadan as the Koranic school described earlier would take care of the armies of Almajiris if implemented as described.

#### 1) *Organization*

Each VRTC should have five different departments, including Guidance and Counseling, Vocation Training, Health and Social Welfare, Agriculture, Sports and administrative and Finance Departments. To reduce costs, the various departments shall be manned by part-time personnel except their Heads who shall be full-time employees. The Vocation Department shall be made up of five units, including soap-making, hair dressing, tying and dyeing, tailoring and barbing for the start. Agriculture Department shall consist of Poultry Farming, Crop Farming, Fish Farming and agro-processing units. The beneficiaries shall be allocated to the various units of these two major departments (Vocation and Agriculture), based on their physical and mental fitness, and or choice. The Health and Social Welfare Department shall be made up of units whose respective responsibilities shall be health and social welfare issues. Guidance and Counseling shall be a one-unit Department charged with the re-orientation of the beneficiaries on the need to see pride in getting engaged in one form of work or the other, and the dent on one's image while he is a beggar or street person. The Department offers words of encouragement and motivation to the beneficiaries at the centre. There shall be a low-cost housing scheme either within or outside the rehabilitation centre

for only those who may unavoidably need it, especially the certified homeless and persons requiring special attention, (the destitute) who may wish to acquire such accommodation and duly apply for it.

#### 2) *Socio-Economic Sustainability of the Scheme*

To keep the scheme going and self-sustaining as well as get the beneficiaries highly motivated the following strategies are recommended:

1. The beneficiaries shall be trained and made to work for the centre in their respective capacities and units of the established Departments.
2. They shall be placed on monthly consolidated honorarium which shall be of two types:
3. The first one is 'disposable income' which is a flat rate of 'minimum wage' obtainable in each of the three states. It shall take care of the feeding, health services and social welfare, as well as accommodation. When those services and facilities or part thereof are provided by the centre, appropriate modalities shall be devised from time to time by the centre to deduct an appropriate amount from the consolidated honorarium. The second type shall be a compensation for hard work and a sort of motivation, and it shall vary from one beneficiary to the other. The activities of the beneficiaries shall be assessed on daily basis and assigned 5, 4, 3, 2, 1, and 0 for very high performance, high performance, average, low, very low and no performance at all. And at the end of each month, average shall be computed for each beneficiary. For instance, if somebody's average performance for the month is 2.2, his honorarium shall be 2.2 divided by 5 multiplied by the monthly honorarium.
4. There shall be monthly and annual offer for sale or trade fair of the farm and other products from the centre by designated officers
5. There shall be, on daily and weekly bases, training in different types of sports for the beneficiaries. Such sports as dance, singing, ludo, 'ayo' 'bojuboju', among others, as indicated earlier, shall be used not only to develop the physical and mental health of the beneficiaries, but also be organized on monthly or quarterly basis at the city's stadium for people to watch on the purchase of ticket to generate fund for the centre.
6. The management of each centre shall be constituted by the representatives of the co-partners. This shall also constitute several finance committees to be directed to different social groups for fund raising and or donations

from philanthropic organizations and individuals as well as religious groups. The committees shall include: (1) Alms Collection from Christians Committee (members of whom to be Christian), (2) 'Zakat' Collection from Muslims Committee (members to be Muslims) (3) Donations from Political office-holders and other Eminent Personalities' Committees and (4) Committees for the collection of Donation from Philanthropic Organizations.

7. The names of members of the committees above, who shall carry identity cards, shall be published in one of the local and national dailies to guide against fraud of impersonation.
8. Other matters not discussed here but may be arising as affecting the rehabilitation scheme shall be settled through joint deliberations between the management and representatives of the three co-partners who provide grants or subventions from time to time as may be agreed upon in the terms of partnership arrangement.
9. Admission into the rehabilitation centre should be restricted to age bracket between 18-59 and evidence of citizenship or being permanent residents of the zone. (This does not, however, affect babies in the case of admitted nursing mothers). The children under 18 should be taken care of at their various schools including schools for the handicapped, while the poor aged (60 and above), whose census is taken regularly, should be entitled to a certain monthly stipend from the government (state and local) to take care of their feeding and accommodation, while they should also be accessible to free health care.
10. The socio-cultural peculiarities of each city shall be taken care of in the dress, operation, accommodation type and welfare service, among others, that may be offered by the centre.
11. To assist proper planning and management of each centre, there should be a census of different categories of the deserving less privileged persons including the homeless, destitute disabled, and able beggars. For the start, this study provides the data base for the affected cities.
12. To aid number (x) above a register should be opened at each local government secretariat for every affected person or his family representative to register the names and particulars of the less privileged person and his predicament with an appropriate department of local government.

13. A separate ministry, parastatal or department should be established at Federal, state and local government levels for the welfare of the less privileged persons. This should be run with sufficient allocations and regular disbursement of funds to execute programmes and strategies for the less privileged persons.

3) *Other socio-economic issues are that:*

1. The overall national urban development policy should be put in place to include issues on rehabilitation programmes / schemes throughout the country.
2. In both public and private sectors at least 5% of the labour force should be reserved for disabled persons trained either at the rehabilitation centre described above or elsewhere. This would encourage more disabled persons in getting involved in skill acquisition or training, and in discouraging them from participating in begging
3. Activities of non-governmental and voluntary organizations that may be involved in rehabilitation programmes for persons with disabilities (PWD) should be encouraged through all necessary legal and social provisions.
4. Research into issues affecting rehabilitation of PWD should be sponsored and embarked upon from time to time.
5. Local, state and inter-state or national special sport fiestas should be organized for people with different forms of disabilities. This would make them have sense of belonging in the society, and make them feel less inferior to able-bodied people. They would, in turn, feel capable of competing with their able-bodied counterparts in the business world. Besides, such sport activities could generate revenue for the organizer (government, rehabilitation centres, philanthropic or other similar organizations), which the participants, would benefit immensely from.
6. The family is regarded as the institution primarily responsible for the welfare of its members. Each Nigerian family should therefore be alive to its social responsibilities especially towards those of its members who are disabled or in one from of distress or the other.
7. Individuals too should not compound the problem of the society by indulging in social excesses marrying many wives and rearing many children whose proper up-bridging they can least afford.



## VI. PHYSICAL PLANNING CONTROL MEASURES AGAINST BEGGING

As observed earlier, incidence of begging is related to urbanization and land use. Attempts at getting rid of beggars on our streets should not be without recourse to physical planning. Against this backdrop, it is recommended that:

1. In each of the cities regular surveys of beggars stations should be carried out (most of these have been exposed in this study for the three cities). With this issues pertaining to landscaping and other forms of maintenance of roundabouts and popular junctions, as well as those related to traffic jam and management will be identified and appropriate actions taken to address the problem. With these, less hide-out and convenient spots will be available for beggars to carry on their business.
2. Our new layout (residential, industrial, commercial etc.) plans should discourage open spaces that may not be manageable by the potential users. When such are created adequate provisions should be made on how to manage them, and such provisions should be well implemented to guide against springing up of indiscriminate location of squatter-informal-sector activities which beggars of different forms mingle with.
3. Development control activities in cities should, through proper monitoring team, include use of police power to evacuate illegal informal sector trades and other business operators on roads and other street persons who usually cause traffic jam and provide good avenues for beggars of different types, including area boys to carry on their business.
4. In order for the point (iii) above to be effective, our new layout plans should, as a matter of fact, make provision for spaces for informal sector activities such spaces should, however, be allocated to potential users and monitored so that they are not turned to another homes of social vices, including begging. For example, potential allottees and users should be warned against allowing his allotted space or part thereof to be used by any person for any unauthorized activity.
5. It should be incumbent on the development control unit of our relevant planning agencies to ensure that detailed designs of such land uses as mosques, churches motor parks, filling stations and markets, among others, should discourage beggars' stations. Such could be achieved by insisting on proper landscaping of each project environment.

## VII. RELIGIOUS CONTROL MEASURES AGAINST BEGGING

There is no doubt the fact that the issue of begging or alms giving is highly connected to religion. Religious groups have a lot of roles to play in re-orientating their people. For the religious groups the following are recommended:

1. The Nigerian Muslim Ummah must take immediate steps to implement the zakat scheme, which, according to the Qur'an Allah has instituted to deal with the problem of poverty and begging. They should as a matter of fact, constitute bodies at various community levels through which their religious members channeled their alms and donations rather than giving directly to beggars. Such alms or donations would constitute a fund that could be made use of to rehabilitate or provide for the needs of different categories of the needy either at rehabilitation centres or at Koranic schools or to those identified in the community as deserving one form of help or the other.
2. The Ulama (League of Islamic Clerics) must promote reforms in the presentation of Islam such that the archaic views, which tend to suggest that begging is inevitable and indeed desirable, should be discarded.
3. There should be regular campaigns and/or public enlightenment programmes on the dehumanizing implication of begging for the beggar and their relations. This, as revealed in this study, would go a long way in reducing incidence of begging in the society.
4. Conferences, like the one of 3-day conference on 'Begging and Destitution' held in Kaduna in 1997, should be held regularly in different parts of the country especially in the north.
5. Other religious groups (Christian and other religious bodies) can also function by constituting themselves as non-governmental organizations and put committees in place to release a certain percentage of their revenues to charity services especially to those that genuinely deserve such service or help. They could have their own rehabilitation schemes/centres separately or jointly with a similar religious body.
6. Islamic groups, especially in the north, should advise strongly their people who have their children and wards in different koranic schools and those willing to do so, that they should see the up-bringing and education of their children as their social responsibility. As a matter of fact, they should see the help coming to any koranic schools or similar organizations as a privilege.



More so, people should be enlightened in the dangers inherent in having their children and wards roaming major streets in search of what to eat in the name of koranic education.

7. Normally, people's perception about the begging phenomenon should change. Religious groups have a lot of roles to play in this direction, as giving alms to the needy as a religious duty does not give the needy the license to remain and feel comfortable with begging.

## VIII. LEGAL CONTROL MEASURES AGAINST BEGGING

It is observed here that lawlessness is a serious phenomenon in Nigerian society. No amount of succor that you give to some unscrupulous people to prevent them from continuing with certain vices they still want to remain bent on it. Legal control, though should be the last option, becomes very inevitable. This study advises, however, that most of the legal control measures to be presented below should take effect only after all other measures have been put in place.

1. There should be a detailed urban development policy that has specific provisions on issues of begging. As a matter of fact, such policy should provide for a check on inter-state migration. This is because many beggars who find it difficult to live as beggars in their own 'country' finds it convenient to do that in a 'foreign land'.
2. There is need for a special police squad that patrols every major street and motor park in each city looking for arriving inter-city commuter buses and commercial cars. This special squad interrogates the alighting passengers on such issues as (1) their origin (2) destination in the city (3) purpose (4) place of residence etc. From their responses those with no specific mission or purpose in the city could be fished out, detained briefly and 'deported' back to their destinations. This would check unnecessary influx of migrants who become nuisance to the city either as beggars or as other categories of street persons.
3. Relevant legislation should be put in place banning unnecessary loitering and illegal occupation of open spaces around public areas including public buildings, motor parks, junctions, filling stations and religious buildings, among others. The special police squad described above can also help in identifying and arresting defaulters of the legislation.
4. Individual shop-keepers or occupant of buildings should be banned from illegal use of their frontage or allowing people to use it for any

illegal or unauthorized activity that can promote loitering of street persons.

5. No lunatics should be allowed to stay or roam the street of cities as some desperate persons can only pretend to be lunatics to perpetrate different forms of begging and other social vices. It is incumbent on relevant agency of government to look for such lunatics and take them to appropriate psychiatric homes or rehabilitation centres where they are well taken care of on the bill of the society as could be obtained from various sources described in different sub-sections of this section, as they (lunatics) are a category of the needy and beggars, that must be taken care of.

## REFERENCES RÉFÉRENCES REFERENCIAS

1. Adedibu, A.A (1989), "Begging and Poverty in Third World Cities: A Case Study of Ilorin, Nigeria" *Ilorin Journal of Business and Social Sciences*
2. (*JBSS*) VOL. 1, pp. 25-40.
3. Jelili, M. O. (2009), 'Spatial and Socio-Cultural Dimensions of Begging in Nigerian Cities', Ph.D Thesis submitted to the Department of Urban and Regional Planning, Ladoke Akintola University of Technology, Ogbomosho, Nigeria.
4. Jibril, N.R. (1997), "The Begging Syndrome in Nigeria and the Way Forward", Paper presented at the 3-Day National Conference on Begging and Destitution in Nigeria at the Arewa House, Kaduna, Sept 5-7, 1997.
5. Ojo, Y. A. (2005), "Begging: A Lucrative, Booming Business", *Nigerian Tribune*, Tuesday, June 21, pp 15-16.
6. Osagbemi, O.M. (2001). "Socio-Economic Characteristics of Beggars and Level of Participation in Street Begging in Jos Metropolis" *Journal of Environmental Sciences* Vol. 5, no1, pp 88-102.



GLOBAL JOURNAL OF HUMAN SOCIAL SCIENCE  
Volume 11 Issue 1 Version 1.0 February 2011  
Type: Double Blind Peer Reviewed International Research Journal  
Publisher: Global Journals Inc. (USA)  
ISSN: 0975-587X

# Impact of Climate on Urban Agriculture: Case Study of Ilorin City, Nigeria

By Ajadi, B.S., Adeniyi Adedapo, Afolabi Monisola Tunde

*University of Ilorin.*

**Abstract-** This paper examines the impact of climate on urban agriculture in Ilorin city. Climatic data on rainfall, evaporation, relative humidity, temperature and sunshine hours were collected for a period of 10 years alongside agricultural data on rice, sorghum, maize, cowpea and yam. Multiple regression, trend analysis and correlation analytical techniques were employed to analyse the data. The result obtained shows that the selected climatic parameters have a weak correlation on urban agriculture within the years under review. It is therefore recommended that the use of fertilizers and modern agricultural techniques should be employed to improve agricultural yield generally in the study area.

**Keywords:** Agriculture, urban, Ilorin city, Environmental factor, Nigeria.

**Classification:** GJHSS-C FOR Classification: 040603, 040607, 050204



*Strictly as per the compliance and regulations of:*



# Impact of Climate on Urban Agriculture: Case Study of Ilorin City, Nigeria

Ajadi, B.S.<sup>1</sup>, Adeniyi Adedapo<sup>2</sup>, Afolabi Monisola Tunde<sup>3</sup>

February 2011

**Abstract-** This paper examines the impact of climate on urban agriculture in Ilorin city. Climatic data on rainfall, evaporation, relative humidity, temperature and sunshine hours were collected for a period of 10 years alongside agricultural data on rice, sorghum, maize, cowpea and yam. Multiple regression, trend analysis and correlation analytical techniques were employed to analyse the data. The result obtained shows that the selected climatic parameters have a weak correlation on urban agriculture within the years under review. It is therefore recommended that the use of fertilizers and modern agricultural techniques should be employed to improve agricultural yield generally in the study area.

**Keywords:** Agriculture, urban, Ilorin city, Environmental factor, Nigeria.

## I. INTRODUCTION

Urban agriculture is the growing, processing and distribution of food and other products through intensive plant cultivation and animal husbandry in and around cities. It includes green belts around cities, farming at the city edge, vegetable plots in community gardens and food production in thousands of vacant inner - city lots (Community Food Security Coalitions of North American Urban Agriculture Committee, 2003). According to Madden and Chaplone, (1997) urban agriculture is the practice of crop cultivation and livestock keeping within the boundaries or the immediate periphery of a city. The choice of what to produce and how to produce it is determined by the culture, traditions, market, water supply, rainfall, climate, exposure to sun, soil condition, plot size and distance from home. Rootpedia (2008) also described urban agriculture as the production of food within the boundaries of a city. In view of the foregoing, climate will undoubtedly be one of the fundamental factors that determine crop cultivation and livestock keeping in the cities. Climate is a long term average weather conditions in a place which exercise some controls and effects on agricultural produce either directly or indirectly.

*About<sup>1</sup>- Department of Geography/Geology Kwara State Polytechnic, Ilorin.*

*About<sup>2</sup>-Department of Geography/Geology Kwara State Polytechnic, Ilorin.*

*About<sup>3</sup>- Department of Geography and Environmental Studies University of Ilorin.*

*E-Mail- afolabi@unilorin.edu.ng*

This means climate forms part of the physical environment in which urban agriculture thrives. Climate determines the choice of what plant to cultivate, how to cultivate it, the yields of crops and nature of livestock to keep. In support of this, Olaniran (1981) suggested that knowledge of climate is relevant in training in agriculture as one of the environmental factors capable of influencing crop production. Ayoade (1988) explained that solar radiation, temperature, moisture and other climatic parameters dependent on them largely determine the global distribution of crops and livestock as well as crop yield and livestock productivity. Olaniran and Babatunde (1987) observed that rainfall distribution and the occurrence of moisture stress condition during vegetative period are critical for the yield formation of maize crop at Kabba, Kogi State.

From the above findings, therefore, climate can be seen as one of the environmental factors capable of affecting urban agriculture. In fact, Ayoade, (2002) succinctly declares that many of the problems facing agricultural products are climate related. It is against this background that this paper is put forward to ascertain the impact of climate on urban agriculture in Ilorin city. The specific objectives are to:

- 1) Examine the relationship between selected climatic elements and agricultural crops;
- 2) Examine the contribution of climatic element to the trends and variation of agricultural production over the period.

## II. STUDY AREA

Ilorin, the capital city of Kwara State, Nigeria is located on latitude 8° 24'N and 8° 36'N and longitude 4° 10'E and 4° 36'E (fig 1) with an area of about 100Km<sup>2</sup> (Kwara State Diary, 1997). It is situated at a strategic point between the densely populated southwestern and the sparsely populated middle belt of Nigeria. Ilorin is located in traditional zone between the deciduous woodland of the south and dry savanna of North of Nigeria (Jimoh, 2003).

The climate of Ilorin is characterized by both wet and dry seasons. The temperature of Ilorin ranges from 33°C to 34°C from November to January while from February to April; the value ranges between 34°C to 53°C (Ilorin Atlas, 1982). The mean monthly

25

Volume XI Issue I Version I

Global Journal of Human Social Science

temperatures are very high varying from 25°C to 28.9°C. The diurnal range of temperature is also high in the area. The rainfall in Ilorin city exhibits greater variability both temporarily and spatially (Ajadi, 1996). The total annual rainfall in the area is about 1200mm (Olaniran 2002). The diurnal regime of moderate rain in the area shows clear nighttime rainfall maximum (Olaniran, 1988). Relative humidity at Ilorin in the wet season is between 75 to 80% while in the dry season it is about 65% (Tinuoje, 1990). The day time is sunny. The sun shines brightly for about 6.5 to 7.7 hours daily from November to May (Olaniran 1982).

The geology of the study area consists of pre-cambrian basement complex rock. The elevation on the western side varies from 273m to 333m above sea level while on the Eastern side it varies from 273m to 364m. Ilorin is majorly drained by Asa River which flows in a South-north direction (Oyegun, 1985, Ajibade and Ojeola, 2004).

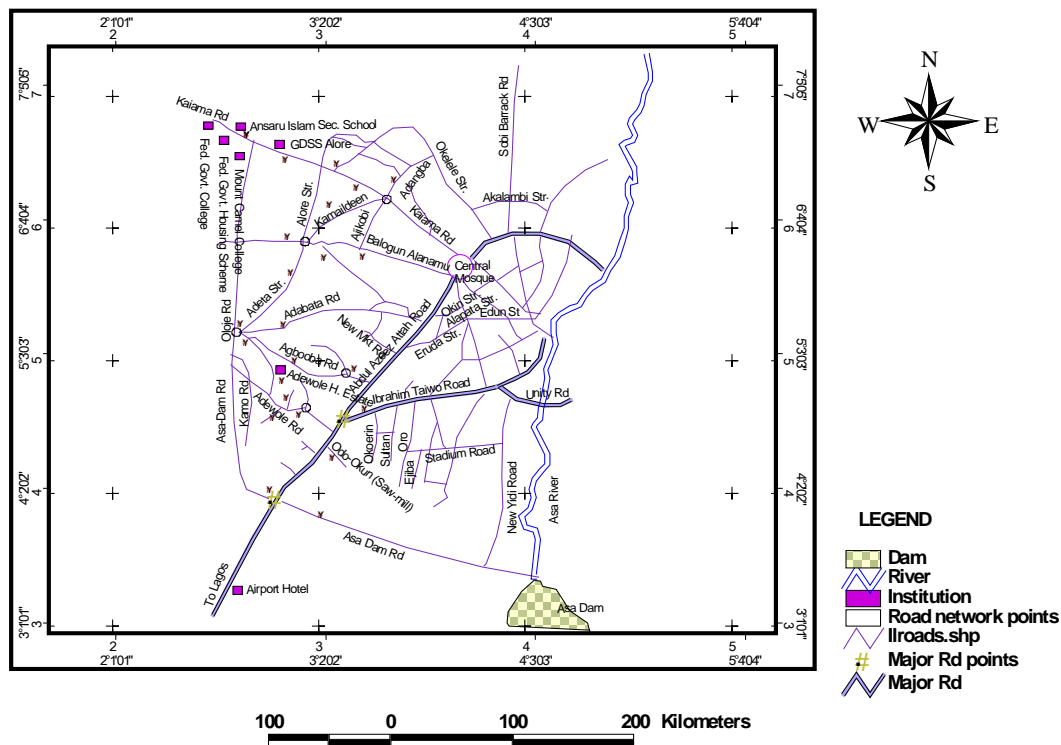
The soils of Ilorin are easy to farm. These are loamy soil with sodium and low fertility. Because of the high seasonal rainfall coupled with the high temperature, there is tendency for lateritic soil to constitute the major soil types due to the leaching of minerals nutrients of the soil (Ajibade and Ojeola, 2004).

The derived Savanna dominates the vegetation of the area. The vegetation type comprises tall grass which is interspersed with scattered trees. Amongst the grasses in the area include spear grass, elephant grass, and goat weed of height of 3.5 meters. Trees in the area include shear butter, acacia and locust beans trees.

Agricultural activities in Ilorin are limited to small garden plots of groundnut, maize, beans and vegetables cultivated mainly for domestic consumption. Cultivation of Yam, Cassava, Guinea-corn,

Vegetables are increasingly done at the outskirts of the city (Ilorin Atlas, 1982). Both climate and soil of Ilorin support the growth of cereal crops.

Fig1 Map showing the study area. Source: Ministry of Lands,Ilorin,2010



### III. METHODS OF STUDY

According to Olaniran, (1981) there are three ways of establishing climate agriculture relationships. The first is the study of the fundamentals of plant-climate relationship namely, the radiation and moisture balance for various crops in various climatic environment. For example Kowal and Kassam (1973)

investigated the climate control of maize yield at Samaru, Zaria Nigeria. The second is by studying agricultural data and climate for a number of places within a given area for as long a period as constant record of both agriculture and climate allow, and deducing agroclimatological relationship from analyses of data. This method was adopted by Olaniran, (1987) while investigating the effect of climate on the growth

of early maize at Kabba, Nigeria. The third involves studying plant-climate relationship under controlled environment. Babalola (1972) varied the soil moisture regime inside a green house with relative humidity averaging 80% and air temperature of 26°C to study the effect of different soil moisture status on the root aerial development of young plants of cocoa, Coffee and Kola.

In this study, the second method which is based on the analysis of agricultural and climatic data was employed. Climatic data on relative humidity, rainfall sunshine hours, temperature and soil temperature were collected from Nigeria Meteorological Service, Oshodi, Lagos for the period of ten years. The choice of these climatic parameters is based on the vital role they play in determining crop yield. Agricultural data were also collected from Kwara State Agricultural Development Project Office, Ilorin on maize, sorghum, Rice, Yam and Cowpea. These are the major cereal and tuber crops grown in the study area.

Both descriptive and inferential statistical techniques were employed in data analysis. While simple correlation and multiple regressions were used in showing the relationship between climatic parameters and crop yield, the Mann-Kendall statistics was used in showing the trend and variation in crop yield over ten years in the study area. These statistical techniques were preferred to others because of their peculiarity in revealing the relationship and variation among variables over certain period.

#### IV. RESULTS AND DISCUSSION

##### 1) *Pattern of Agroclimatic Variables in Ilorin City (1991 – 2000)*

Table 1 shows the descriptive analysis of the agricultural data in Ilorin 1991 – 2000. Out of the five selected crops, yam has the highest mean value (10.85). This was followed by rice (1.70) while cowpea

has the lowest mean value (0.75). This implies that within the years under study, yam has the highest yield value. Similarly, the highest deviation was obtained in yam production (1.43). This reveals that the dispersion characteristics of the crop production in Ilorin city are generally low. The coefficient of variation which shows the relative deviation between crop yields indicated that both rice and yam are heterogeneous with values greater than 33%. This suggests that the values of rice and yam produced in the study years differ significantly. The relative deviation in crop production could be as a result of impact of climate on soil fertility.

Table 1: Descriptive Analysis of Agricultural Data (1991 – 2000)

Crop	Mean Yield	Standard Deviation	Co-efficient of Variation (%)
Maize	1.19	0.32	26.89
Sorghum	1.51	0.41	27.15
Rice	1.70	0.60	35.29
Cowpea	0.75	0.21	28.00
Yam	10.85	1.43	77.30

Source: Authors' Computation, 2010.

##### 2) *Descriptive Pattern of Climatological Data (1991 – 2000)*

Rainfall and Relative humidity have their highest mean values in 1991 (See Table 2). This reveals that 1991 is the wettest year during the period under review. Similarly, soil temperature and maximum temperature have their highest mean in 1998. Sunshine hours have its highest mean value in 2000. The mean value, of rainfall and relative humidity vary significantly. Generally, the descriptive pattern of climatological data shows that some of the climatic parameters vary from one year to the other. This therefore suggests variation in crop yield.

Table 2: Descriptive Pattern of Climatological Data (1991 – 2000)

Year	Rainfall (Mean)	Temperature (max)	Relative Humidity (%)	Soil Temperature	Sunshine Hour
1991	1355.7	31.9	76.3	29.6	5.9
1992	641.9	32.0	68.2	29.3	5.7
1993	819.5	32.5	71.0	29.2	6.4
1994	959.3	32.1	71.6	28.9	6.3
1995	1220.5	32.0	71.9	28.8	6.2
1996	682.6	33.1	64.0	29.9	6.7
1997	999.6	31.4	65.0	29.1	6.0
1998	1257.1	33.5	72.5	29.7	6.3
1999	1270.4	32.0	74.8	29.0	5.5
2000	708.6	33.0	71.3	29.4	6.8

Source: Nigeria Meteorological Service, Oshodi, Lagos (2009).



### 3) Relationship between Climatic Variables and Crop Yield

The result of the regression analysis shows that 21.7%, 18.6%, 30.8%, 66.1% and 55.4% of the variance in maize, sorghum, rice, cowpea and yam can be respectively explained by the climatic parameters

(Table 3). This implies that the impact of climate on crop yield variation over the years under study is low except that of cowpea and yam. This therefore, suggests that variation in crop yield could be attributed to other non-climatic factors such as soil fertility and farm techniques amongst others.

Table 3: Statistical Relationship between Climate and Crop Yield

	R	R <sup>2</sup>	Regression Coefficient	Standard Error	F	Significant
Maize	0.466	0.217	4.038	6.754	0.222	0.935
Sorghum	0.431	0.186	6.025	7.297	0.183	0.955
Rice	0.555	0.308	18.625	23.763	0.356	0.856
Cowpea	0.813	0.661	-4.172	5.795	1.557	0.344
Yam	0.744	0.554	14.859	28.955	0.993	0.517

Source: Authors' Computation, 2010.

#### 1) Trend in Crop Yield

The result of the trend analysis using Man-Kendall method shows that there is no significant difference or decline in the values of the crop yield at either 95% or 79% probability levels. This implies that no differential pattern of variation exist in output of crop yield in each successive year under review.

Table 4: Trend in Crop Yield

Crops	r (t)
Maize	0.1
Sorghum	0.5
Rice	0.7
Cowpea	0.5
Yam	-0.1

Source: Authors' Computation, 2010.

#### 2) Correlation Analysis

The correlation coefficient (r) between the climatic parameters and the selected crop yields were computed (Table 5). The result shows that the correlation values of all the climatic parameters and the crop yields are less than 0.5 except that of temperature and cowpea. This implies that the climatic parameters have a weak correlation with the selected crops. However, relative humidity has a negative correlation with sorghum, rice, and cowpea. Similarly, soil temperature has a negative correlation with maize,

sorghum, rice and yam. This implies that as the climatic parameters increase, the values of the crop yield reduce in the study area.

Table 5: Correlation Analysis

Crops	Rainfall	Temperature	SH	RH	St
Maize	0.057	0.158	0.210	0.165	-0.174
Sorghum	0.131	0.063	0.102	-0.024	-0.239
Rice	0.176	0.121	0.217	-0.011	-0.230
Cowpea	0.362	0.649*	0.304	-0.009	0.321
Yam	-0.122	-0.160	0.456	0.166	-0.50

Source: Authors' Computation, 2010.

\* Correlation is significant at the 0.05 level (2-tailed).

## V. CONCLUSION

In this study, the result obtained from the regression and correlation statistics reveals that climate has little impact on crop productivity within the years under review. In other word, the result implies that, though there are variations in climatic parameters within the years, such variation has little impact on the selected crops. This suggests that variation in crop yield could be as a result of other factors. Such factors could be soil or farm techniques in Ilorin City Nigeria.

## VI. IMPLICATION OF THE STUDY FOR PLANNING

Based on the above findings, the study thus recommends the following measures towards improving urban agriculture in Ilorin city, Nigeria.

- (i) Application of fertilizer to improve soil fertility and productivity,
- (ii) the use of modern agricultural techniques to boost crop yield,
- (iii) introduction of crop improvement practices to increase productivity, and
- (iv) application of insecticides to reduce the effects of pests on crops.
- (v) Introduction of improved seedlings and input for high crops yields.

## REFERENCES RÉFÉRENCES REFERENCIAS

- 1) Ajadi, B.S. (1996). *Pattern of Water Supply in Ilorin City, Nigeria*. An Unpublished B.Sc Dissertation, Department of Geography, University of Ilorin.
- 2) Ajibade, L.T. and Ojelola A.O (2004), Effects of Automobile Mechanics Activities on Soils in Ilorin Nigeria *Geo-Studies Forum an International Journal of Environmental and Policy Issues* 2 (1): 18-27.
- 3) Ayode, J.O. (1988). *Introduction to Climatology for the Tropics*. Spectrum Books Limited, Ibadan.
- 4) Ayode, J.O. (2002), *Introduction to Agoclimatology*, Vintage, Publisher, Ibadan
- 5) Babalola, O. (1972) A Preliminary Investigation into the Water Relations of Cocoa, Coffee and Kola, *Nigerian Agric Journal*, 9: 78-82
- 6) Community Food Security Coalition's North American Urban Agriculture Committee (2003) Urban Agriculture and Community Food Security in the Limited States. *Farming From the City Centre to the Urban Fringe*.
- 7) Ilorin Atlas (1982) Geography Department University Press, Ilorin, Nigeria.
- 8) Jimoh, H.I. (2003), Erosion Tolerance Range of Landuse Surface: Implication on Land Resource Use and Management Techniques in Ilorin, Nigeria, *Intern. Journal on Environmental Studies*, 60(5) 445-452.
- 9) Kowal, J. M and Kassan, A.H. (1973), Water Use, Energy Balance and Growth of Water at Samaru, Northern Nigeria, *Agric. Meteorology*, 12:391 – 406
- 10) Madden, J.P. and Chaplone, S.G. (1997). "For All Generations: Making World Agriculture More Sustainable". Paper Presented at the

Overcoming Underdevelopment Conference Held in Glendale.

- 11) Olaniran O.J. (1981), Research in Agroclimatology in Nigeria, *Journal of Agric. Research*, 19(1) 15-29.
- 12) Olaniran O.J. (1982) The Problems in the Measurement of Rainfall: An Experiment at Ilorin, Nigeria, *Weather*, 37 (7) 201 – 204.
- 13) Olaniran, O.J and Babatunde, J.S (1987) Effect of Climate on the Growth of Early Maize at Kabba. *Geo-journal* 14(1): 71-75.
- 14) Olaniran O.J. (1988) The July – August Rainfall Anomaly in Nigeria, *Climatologically Bulletin*, 22(2) 26-38.
- 15) Olaniran (2002) "Rainfall Anomalies in Nigeria: The contemporary understanding" 55<sup>th</sup> inaugural lecture, university press, Ilorin. 66pp
- 16) Oyegun, R.O. (1985). The Use and Waste of Water in Third World City. *Geographical Journal*. 10 (28 – 33).
- 17) Rootpedia (2008). Urban Agriculture Collective Roots Org.
- 18) Tinuoye A. (1990) "Climatic Condition in Dry and Wet Years at Ilorin" *Unpublished B.Sc. Project Work*, University of Ilorin.



This page is intentionally left blank



GLOBAL JOURNAL OF HUMAN SOCIAL SCIENCE  
Volume 11 Issue 1 Version 1.0 February 2011  
Type: Double Blind Peer Reviewed International Research Journal  
Publisher: Global Journals Inc. (USA)  
ISSN: 0975-587X

# Knowledge Management in Education in Indonesia: An Overview

By Nikolaus Salo, M. Ed

*International Organization for Migration (IOM)*

**Abstract-** Our era hic and nunc was known as “knowledge era”, “knowledge community” or “knowledge society”. The reason is that knowledge has become the central of this era. The main problem is on how to manage this knowledge in order to become an asset as problem – solving tool, especially in the area of education. That is why, in early of 1990s experts tried to explore the notion of “knowledge management”. As a consequence, knowledge management has been recognized as an effective instrument for improving the performance and productivity of an organization in this knowledge era including in education areas. Today, knowledge management has become “the heart of education and research in terms of development and improvement” worldwide. In this context, knowledge management is a process, process of acquisition, validation, utilization, sharing, storage and diffusion of knowledge. However, in Indonesia many educational institutions have not been implementing knowledge management as a strategic vision, a mission nor as goals comprehensively. One of the reasons is the limitation of a medium in accessing knowledge management information and in getting into the sources of knowledge. This paper is an overview of knowledge management in an educational context. The general ideas on knowledge management in education are explored in this paper. Such as, experts have emphasized that educational institutions are the centre of knowledge acquisition. Therefore, educational institutions should manage knowledge as the heart of education in a sustainable way. In addition, this paper analyzes knowledge management concept from the perspective of education and explores strategies in sustaining knowledge management in education, which in turn, can solve educational problems. This paper also provides a framework of knowledge management process in education for future practice in Indonesia.

**Classification:** GJHSS-C FOR Classification: 130103, 130304, 130313



*Strictly as per the compliance and regulations of:*



# Knowledge Management in Education in Indonesia: An Overview

Nikolaus Salo, M. Ed

February 2011

**Abstract**—Our era hic and nunc was known as “knowledge era”, “knowledge community” or “knowledge society”. The reason is that knowledge has become the central of this era. The main problem is on how to manage this knowledge in order to become an asset as problem – solving tool, especially in the area of education. That is why, in early of 1990s experts tried to explore the notion of “knowledge management”. As a consequence, knowledge management has been recognized as an effective instrument for improving the performance and productivity of an organization in this knowledge era including in education areas. Today, knowledge management has become “the heart of education and research in terms of development and improvement” worldwide. In this context, knowledge management is a process, process of acquisition, validation, utilization, sharing, storage and diffusion of knowledge. However, in Indonesia many educational institutions have not been implementing knowledge management as a strategic vision, a mission nor as goals comprehensively. One of the reasons is the limitation of a medium in accessing knowledge management information and in getting into the sources of knowledge.

This paper is an overview of knowledge management in an educational context. The general ideas on knowledge management in education are explored in this paper. Such as, experts have emphasized that educational institutions are the centre of knowledge acquisition. Therefore, educational institutions should manage knowledge as the heart of education in a sustainable way. In addition, this paper analyzes knowledge management concept from the perspective of education and explores strategies in sustaining knowledge management in education, which in turn, can solve educational problems. This paper also provides a framework of knowledge management process in education for future practice in Indonesia.

## I. INTRODUCTION

Knowledge has been acknowledged as an asset, as capital, as a resource and as power in improving organizational performance for competitive advantage; knowledge management has become a standard practice in an organization worldwide (Evers & Gerke, 2005). Meanwhile,

*About*—Working at International Organization for Migration (IOM) Indonesia based in Maumere Flores, NTT, Indonesia. He can be contacted on nikolaussalo@yahoo.co.uk or nsalo@iom.int.

knowledge management is viewed as an entity through which people or the organization establishes new decision-making processes and re-conceptualizes the organizational structures. However, many organizations have not implemented knowledge management as a strategic vision, a mission or as goals effectively. The issue of not embracing the sustainability of knowledge management in the organization is also faced by education institutions in Indonesia.

The key issue in the literature surrounding employees and especially leaders and leadership's commitment and participation in managing knowledge is the difficulty of articulating and implementing the conceptual framework into a sustainable approach in organizational practices. The main challenge many organizations face in taking leading roles in implementing knowledge management in their organizations, including education, is on how to learn and struggle in sustaining this practice (Wick, 2000). Essentially, these problems were epistemologically and ontologically based. This means the problems are generated from the nature and philosophy of knowledge and knowledge management. They are also engendered from the real practice of knowledge creation and effective knowledge management in educational institutions.

Education institutions have carried out programs in relation to knowledge acquisition such as training, surveys, study tours, workshops, seminars, conferences, teaching and learning processes, research, networking, organizational self-assessment, strategic planning, and conflict resolution. The problem is on how to document and codify the results of these activities as knowledge assets and managing these knowledge assets in the organization continually, which will become a lesson-learned for others and for the next generation (Salo, 2009). Ultimately, the problem of articulation and the implementation of a knowledge management strategy in a sustainable way in educational organization are not straightforward and the potential solutions and resolutions evidently need a wide range of strategies and a strong and visionary leadership on how to re-structure and institutionalize this practice in an education organization.

31

Volume XI Issue I Version I  
Global Journal of Human Social Science



## II. THE CONCEPTUAL FRAMEWORK OF KNOWLEDGE MANAGEMENT

### 1) *The Conception of Knowledge Management*

The terminology of knowledge management was introduced in the 1990s. It roots in many principles. For example, it comes from a philosophical view to understand the role and nature of knowledge. It emerged from concrete concerns for organizations to understand “the very nature of knowledge, how it is generated and created, how it is represented and structured, and how it is accessed and utilized” (Todd & Southon, 2000, p.142).

Alavi and Leidner (1999) defined knowledge management as “a systematic and organizationally specified process for acquiring, organizing, and communicating both tacit and explicit knowledge of employees so that other employees may make use of it to be more effective and productive in their work” (p. 1). Implicitly, this definition illustrates the strategic goals of knowledge management, where knowledge management is a strategic direction for the organization and its members to achieve their strategic objectives. However, the authors did not include other elements in the organization, excluding employees, such as management, leadership and other stakeholders in the organization involved in the process of knowledge management. Although it is true that the author elaborated knowledge management as a systematic process, predictably it demonstrated the active perspective of knowledge management; rather than knowledge management only as a passive activity.

Knowledge management in the context of education includes tacit and explicit knowledge. Knowledge management is a form of expertise management which draws out tacit knowledge making it accessible for specific purposes to improve the performance of the organization. The tacit knowledge is embedded and embodied in every individual of the organization (Nonaka & Takeuchi, 1995). The explicit knowledge is represented in the forms of program activities, documents, libraries, organizational plans, research results reports, books, and computer-based data (Rusanow, 2007). Therefore, in order to remain competitive, educational organization has to embrace knowledge management simultaneously and continuously.

Knowledge management is also a process; a systematic process of knowledge acquisition, utilization, storage and diffusion. Skyrme (2003) emphasized knowledge management as the explicit and systematic management of vital knowledge and its associated processes of creating, gathering, organizing, diffusing, use, and exploitation. Knowledge management is a process of communicating both tacit and explicit

knowledge between employees so that, in turn; they have the common perceptions and share that knowledge. This paper suggests that knowledge management is a process of creating a common language in the organization (education) and the educational community so that all of the educational community and other stakeholders in the organization can understand and construct new knowledge. At this point, the role of the leaders and leadership in educational organization is essential, especially in managing knowledge in a sustainable way.

### 2) *Knowledge Management as a Process*

Knowledge management as a process recognizes and comprehends a landscape of activities, programs, capabilities and initiatives. The process of knowledge management is active, dynamic, productive and innovative (Zack, 2002). The dynamic aspects entail a strategic perspective of knowledge management. Furthermore, knowledge management is a precondition of learning in the organization. Knowledge management includes “processes that allow learning to occur and knowing to be internalized”, (McInerney, 2002). Consequently, knowledge management is not just an abstract concept, but it is also a practical instrument for teaching and learning process. If knowledge management is a process, it can transform tacit knowledge to explicit knowledge, allowing others in educational organization to use it for decision-making process and policy design (Nonaka & Takeuchi, 1995). From an educational perspective, knowledge management can become an instrument for reforming an educational system. As a process “knowledge management effectively engages and utilizes human competencies, experiences, expertise, skills, talents, thoughts, ideas, intuitions, commitments, innovations, practices, and imaginations and integrates them into the information resources an organization uses to achieve its goals”, (Todd & Southon, 2000, p.148). Therefore, knowledge management contains a wide range of interaction processes dealing with knowledge, especially in education.

### 3) *The key features of Knowledge Management*

In order to understand and sustain knowledge management in an educational organization, it is important to consider its key principles. This paper looks at three principles of knowledge management in education: contextual, holistic and problem-solving. These principles are reflected and examined as *sine qua non* (an advantageous environment) for an effective knowledge management in education context. These principles are as follows:

dimensions and every organization is unique. As a result, knowledge management practices should be put in context, in a sense that knowledge management practices need to be articulated according to the context of educational organization. Reasonably, "knowledge is created in context, knowledge is context sensitive [and] the user must be able to know the context under which the [knowledge] artifact was created", (Desouza & Awawu, 2005, p.767). This implies disseminating and contextualizing knowledge management practices in the organization, such as education. Wick (2000, p. 515) emphasizes that knowledge management becomes;

*"less confusing when we understand that the multiple definitions are relative to the context, in which they are used, most notably the disciplinary influences of the people implementing knowledge management and the organizations in which it is implemented."*

The second principle is *holistic*. Holistic means managing knowledge comprehensively in an educational organization. Holistic knowledge management includes tacit and explicit knowledge (Nonaka & Takeuchi, 1995), codification and personalization (Hansen *et al.*, 1999). This also means integration between people and technology, knowledge acquisition, assessment, utilization and diffusion, analytical/theoretical and practical knowledge management (Rusanow, 2007). Holistic knowledge management is to integrate it with familiar aspects of the organization: strategy, process, culture, behavior (Davenport & Prusak, 1998). What is needed in this knowledge era is a much more holistic approach to knowledge management. Bell (2003, p.99) suggested, "The emphasis will be on holistic policies that focus on integration rather than fragmentation, recognize that the sum is greater than the parts". Knowledge management, therefore, should be long-term and holistic, in order to remain competitive in this knowledge era.

The third principle is *problem-solving*. The most fundamental purpose of knowledge management is for educational problem-solving. Successful knowledge management strategy and initiative in the organization emerges with specific organizational problems, which the organization is trying to solve (Gordon, 2005). For example, an educational perspective, knowledge management initiatives are emerging based on the problems of knowledge diffusion and distribution, lack of codifying and knowledge sharing. That is why Bickerstaff, as quoted by Gordon, highlights that knowledge management has to be perceived as an organization problem solver, not

as an abstract concept. For that reason, it is important to maximize the significance of knowledge management as a problem-solving mechanism in the organization and in the community, then, in turn, it can impact on a just and balanced policy and decision making design process in education institutions.

### III. KNOWLEDGE MANAGEMENT IN EDUCATION

From a reflexive perspective, the complexity and problematic of national educational quality in Indonesia is due to the problem of not embracing knowledge management in education areas. For example, in 1970s, education quality in Indonesia was really good. It became lesson-learned for other nations, such as Singapore and Malaysia. However, this best – practices (knowledge) were not maintained by Indonesia. This was an evident of not sustaining knowledge management in education sector in Indonesia.

Experts highlight that the main business of education sector is in acquiring knowledge. In addition, in order to achieve a better quality education, educational departments have to apply knowledge management in a sustainable way. Such as Gürbüz (n.d) points out that:

*"The management of knowledge has always been at the heart of education and research in terms of development and improvement. This reality together with the complex interplay of social, economic, and technological forces (is) strengthening the importance of knowledge and its management"*.

Consequently, educational institutions should seriously articulate knowledge management in the teaching and learning process. The reason is that, the philosophy of teaching and learning is not about how knowledge is transferred from teachers to students, but on how the learners can design and create new knowledge from the present knowledge. There are lots of means for creating new knowledge, that is, through research, surveys, and field studies.

In relation to the implementation of School-Based Management (SBM) in Indonesia, it is hoped that the education community not only manage personnel/human resources, financial, facilities and curriculum, but knowledge as well. Managing knowledge should become the central focus in education institutions. Therefore, this paper outlines a model of knowledge management in education in Indonesia for future practices.

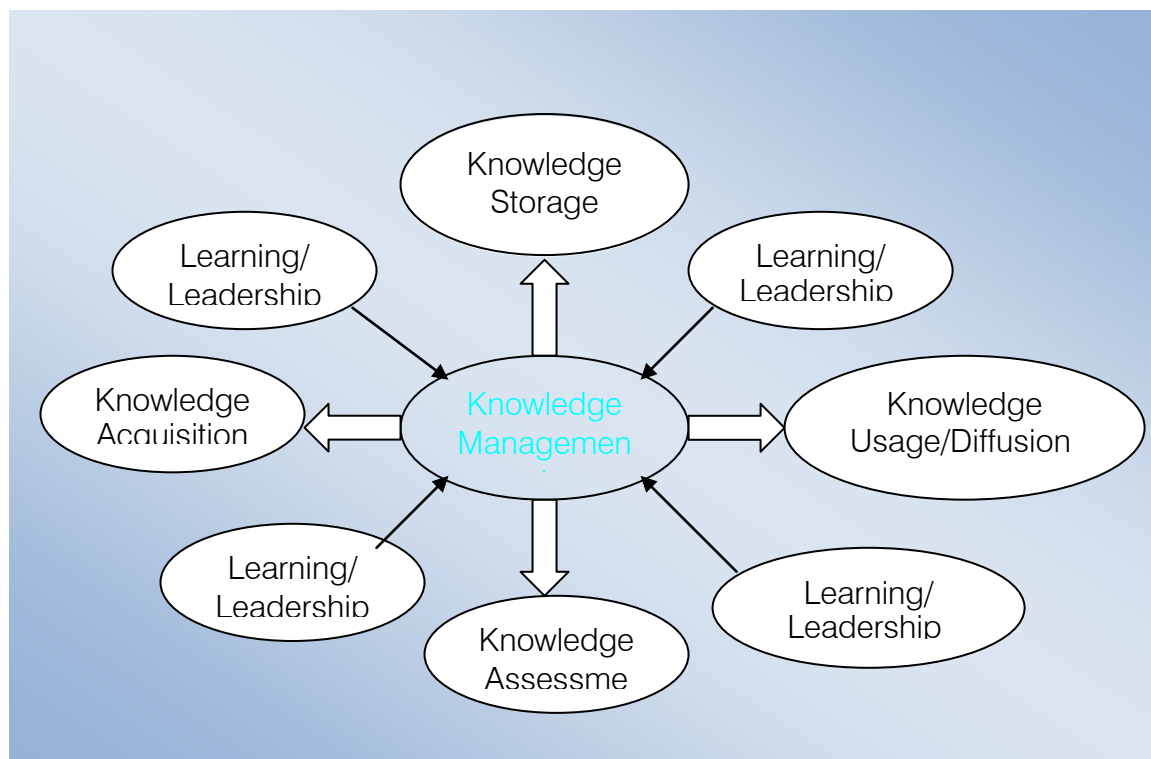


Figure 1: Knowledge Management Model in Education

There are several elements in this model, that is, knowledge management, knowledge acquisition, knowledge assessment, knowledge usage, knowledge diffusion, knowledge storage, learning and leadership. These components can be described as follows:

#### 1) Knowledge Management

In the proposed model (Figure 1), knowledge management becomes the central feature of the organization. Knowledge management is the movement of knowledge acquisition, validation/assessment, diffusion, storage, utilization and learning processes (Patriotta, 2003). Knowledge management becomes a strategic solution and effectively engages and utilizes human competencies, experiences, expertise, skills, talents, thoughts, ideas, intuitions, commitment, innovations, practices, and imagination and integrates them into the information resources the organization uses to achieve its strategic goals (Todd & Southon, 2000). Therefore, an educational community should embrace knowledge management as a strategy in implementing the organizational philosophy and operations.

That is why expert emphasizes the priorities of knowledge management in an organization, including education institution:

*Where strategic knowledge is strong, knowledge management can focus on enabling knowledge sharing and distribution, and ensuring that learning is focused on maintaining a strong competitive knowledge position. Where opportunities abound, knowledge management can focus on exploring the firm's (education) "knowledge platform" by deriving new products or services from or by locating new markets for its knowledge. Where weaknesses exist, knowledge management must focus on acquiring knowledge, for example, through training, recruiting, or alliances. Where threats loom, knowledge management must focus on providing sufficient learning opportunities and capabilities to strengthen the firm's (education institutions) knowledge position. In all cases, a firm's (education) strategic agenda and competitive context should drive the priorities for knowledge management (Zack, 2002, p. 275).*

## 2) Knowledge Acquisition

The sources of knowledge or knowledge acquisition can be categorized into two – internal and external. Knowledge acquisition means the development or creation of skills, insights, relationships, whether internally or externally (Nevis *et al.*, 2000). Lave (1993) argued that the acquisition of knowledge is not a simple matter of taking in knowledge; rather, things assumed to be natural categories, such as 'bodies of knowledge', 'learners', and 'cultural transmission', require re-conceptualization as cultural, social products. Based on this theoretical basis, there are at least three major sources for knowledge acquisition in education.

### a) Knowledge Organization

The notion of the knowledge organization is explicitly underpinned by the hypothesis that at the beginning of an organization, it has prior knowledge. The founders, boards, controlling sections, staff all have prior knowledge. Byham *et al.*, (2002, p.356) viewed the knowledge organization as "the degree of understanding that senior managers must have about how the organization operates. Included are areas such as functions, process, systems, and products and services". Liebowitz and Beckman (1998) defined knowledge organization as an entity that realizes the importance of its knowledge, internal and external to the organization, and applies techniques to maximize the use of this knowledge to its employees, stakeholders, and customers. Furthermore, Tsoukas and Vladimirou (2001, p.973) conceptualized knowledge organization as;

*the capability members of an organization have developed to draw distinctions in the process of carrying out their work, in particular concrete contexts, by enacting sets of generalizations whose application depends on historically evolved collective understandings.*

However, this paper underlines knowledge organization as acquiring tacit and explicit knowledge through teaching and learning processes, interactions, and through the process of carrying out other program activities in education. Knowledge is a valuable asset and the source of competitive advantage of the organization. At this point, educational institution is as a body of knowledge, focusing on turning its ability to create, manage and diffuse knowledge as a determinant of competitive performance (Patriotta, 2003). However, the current debate on knowledge organizations has highlighted the difficulty of documenting empirically the process of creation, accumulation, and maintenance of knowledge in the organization.

### b) Staff-Based Knowledge

All organizations, including educational institutions are potentially rich in staff-based knowledge or educational community based-knowledge. Wiig (2000, p.25) states that "people are the intelligent agents that create and act on new opportunities". Therefore, the organization needs to empower the staff with new skills, knowledge and encourage new attitudes. In addition, Bessant (2003, pp.6-7) states that:

*Those organizations that invest in developing the specific knowledge and skills of their employees and the general capability to learn, those that provide opportunities and space for interaction and share learning, those that emphasize effective communication and sharing of information, those that recognize and reward learning behavior – these are likely to be the organizations that succeed in developing into the kind of learning organization that is much talked about but hard to achieve.*

Knowledge is created or acquired through the interactions among individuals or between individuals and the environment. In this sense, educational staffs are really the organization's most valuable assets. Staffs actually represent the powerhouse for learning. Without actively committed and focused learning, any organization is likely to stagnate and will struggle to create the steady stream of change it needs to survive. Investments in assets like buildings, equipment or IT systems may help the organization, but without a core learning capability the long-term future will be uncertain (Bessant, 2003).

### c) Program Activities-Based Knowledge

Knowledge can be acquired through program activities in educational process. These knowledge-based activities are networking, research, experiments, training, workshops, seminars and teaching and learning processes. Through these program activities, educational institutions can acquire new knowledge, skills and modify attitudes. Training, for example, is an investment that the organization designs. Jones (1994) conceptualized training as a planned process to modify attitudes, knowledge, skills, or behavior, through learning experience that achieve effective performance in an activity or range of activities. In the work situation, these activities develop the abilities of the individual and satisfy the current and future manpower needs of the organization.



### 3) *Knowledge Assessment*

In order to maximize the use of knowledge, the organization tries to audit or assess knowledge internally and externally. In the process of auditing, the organization is being selective - which knowledge should be removed and which knowledge could be used. In a world where access to information is fast and widespread, those organizations which can create and use their own knowledge are likely to be able to build and sustain a competitive advantage. Thus, the organization needs to become good at learning – and occasionally forgetting knowledge that they no longer need (Bessant, 2003).

Knowledge auditing is inevitable as part of a knowledge management strategy. It must be put in place at the first stage of knowledge management initiatives. However, on the practical level, it is often neglected. A knowledge audit is important to justify and validate whether the knowledge acquired is qualified or not, and in turn, whether it can be used, shared, or stored in the organization (Henrie & Hedgepeth, 2003). In spite of this, knowledge auditing is not just the first stage of the knowledge management initiatives, but it should continue throughout the process of knowledge management in educational organization. Therefore, a knowledge audit is an effective tool in order to assess knowledge and learning strategies in the organization.

### 4) *Knowledge Utilization*

The validated knowledge provided through an audit is imperative to use in the organization. Knowledge utilization means the integration of learning so it is broadly available and can be generalized to new situations. Knowledge utilization is the process of articulating and applying the acquired and validated knowledge in influencing decision-making, policy design, problem-solving or creating new solutions for human needs. It takes advantage of new opportunities and it creates new knowledge. Knowledge always undergoes construction, transformation and retention in use and action (O'Toole, 2004a).

### 5) *Knowledge Sharing*

Most studies of organizational learning have been concerned with the acquisition of knowledge and, to a lesser extent, with sharing or dissemination of the acquired knowledge or knowledge diffusion. Less is known about the assimilation process, the stage in opposed to being the property of select individuals or which knowledge becomes institutionally available, as groups (Nevis *et al.*, 2000). Therefore, the organization should efficiently share this knowledge throughout or in every level of the organization.

However, recent studies have rejected transfer models which isolate knowledge from practice and emphasized the social, situated nature of the learning experience. The main claim of situated learning theories is that knowledge is embodied and embedded in praxis – action and reflection (Freire, 1996). Patriotta (2003) emphasized, rather than being passive recipients, the communities of learners are constantly engaged in sense-making and interpretation activities whereby knowledge is appropriated out of a wide range of materials. So the focus is not how knowledge is transferred but mainly on how that knowledge is understood and internalized. And in turn, how it creates new knowledge and solves problems. Therefore, the organization needs a new culture that supports learning and knowledge sharing in the organization.

The main issues for educational institutions are knowledge loss and unsustainable knowledge management in the organization. Research in this area has proved knowledge loss and unsustainable knowledge management are the key concerns in many organizations (Newman, 2003). However, Nonaka and Takeuchi (1995) laid a strong foundation for knowledge management practices in the organization by figuring out the cyclical conversion of tacit and explicit knowledge. In the process of interactions between employees in the organization and through social processes, tacit knowledge becomes explicit, and in turn, accessible and available to all employees and other stakeholders in the organization.

The new understanding of knowledge management strategy in the organization emphasizes the need to adjust the present practices, as well as the creation and application of new knowledge within new practices in the organization. The co-modification of knowledge is suggesting a causal relationship between organizational knowledge and competitive performance, and an improvement of the way the organization manages knowledge (Patriotta, 2003). Therefore, a deep awareness and reflection on knowledge management sustainability in educational organization is really essential needed.

### 6) *Knowledge Storage*

The acquired and validated knowledge needs to be stored, in order to protect it from loss. There are strategies to store knowledge. For example, it can be stored through documents or technology. Technology provides means of storing and retrieving knowledge through computerization (Swan & Newell, 2000). This is important, so that other people or the next generation can access the same knowledge. However, the organization must do more than accrue and store knowledge in order to improve their profitability and effectiveness (Henrie & Hedgepeth, 2003).



## 7) Learning

Learning in this paper is seen as a channel where knowledge is acquired. Knowledge is acquired through learning, learning from the organization, experts, program activities, other staff and stakeholders. Learning is "the central process promoting openness, communication, trust and the shape of decision rules where it is inclusive, accessible and based on reliable knowledge" (Cooke, 2002, p.85). Learning is profoundly socially interactive and is a constructed understanding. Trust is a fundamental requirement and, if successful, an outcome of the learning process. The organization needs to provide the environment and culture in which individual learning can take place. In the end learning is essentially a human process involving individuals and groups in different configurations and the outcomes of learning are new knowledge and innovations (Bessant, 2003).

Gürbüz (n.d) describes the goal of knowledge management is to develop the potential for the learning of individuals and organizations, by developing, exchanging, and using knowledge; knowledge management can thus be seen as a prerequisite for innovation in organizations. This new understanding of education will move from being curriculum driven to being learning centered. Today's knowledge society emphasizes innovation and intellectual capital and makes knowledge management a strategic issue that holds one of the highest potentials for gaining efficiency, and creating value in organizations. Consequently, the asset base is shifting from traditional tangible assets to an intangible asset base such as innovation, effective utilization of knowledge and human capital resources. It is necessary to understand how to strengthen the management of knowledge for supporting activities, and planning quality standards. Furthermore, knowledge management initiatives are required to adapt to meet new challenges and retain the leading organizations in education and research.

## 8) Leadership

A new challenge of the organization-based knowledge today is the issue of sustainability. Problems of sustainability occur, in part, because of the limitations of the leadership skills and effectiveness (Stoll & Earl, 2001). The main reason is that, leadership cannot handle all aspects of management in the organization. However, the terminology of sustainability has different interpretations in organizations and society. Sustainability always relates to the social,

environmental and economic implications and values in the society (Gilding, 2000). Thus, it is important to articulate a leadership style that can keep "the organization focused on its long-term goal of becoming sustainable while encouraging employees to work together diligently toward that end", (Doppelt, 2003, p.38).

In this context, leadership has the important role of creating and providing the organizational climate, so that knowledge acquiring, audit, utilization and diffusion, and knowledge management can be carried out effectively. Strategic leadership is seen as a key element in effective strategic management (Joyce, 1999) of the organization. The reason is that "once an unambiguous vision of the future and clear principles have been set out, a sequenced set of strategies, priorities and tactics can be established to attain them", (Doppelt, 2003, p.131).

*Nonaka and Konno (1998) argues that successful knowledge management occurs when leadership embrace and foster the dynamic of knowledge creation. In this framework, the roles of the leaders and leadership are providing and enabling spaces for knowledge creation. Leaders must support emerging processes with visionary schemes and a personal commitment of time and power. The real support of leaders and leadership towards knowledge creation are things such as responsibility, justification, financial backing and caring. Therefore, managing emergent knowledge in the organization requires a different sort of leadership. It is very important to have leadership roles in every level of the organization, leadership at the core as well as at the periphery (Schueber, 2003) of the organization in influencing knowledge management sustainability. There are various roles of leadership in education; such as vision and mission setting, creating culture and structure of knowledge, empowering staff, creating knowledge management systems, and being open to change.*

### a) Vision and Mission Setting

Vision is one of the leadership characteristics in the organization. The leaders and leadership challenge the process, share an inspired vision, and enable others to act and model the way forward. Vision and leadership become the key elements in the organization, where the vision provides the goals, whereas principles frame the path for the organization (Doppelt, 2003). The other directions relate to manufacturing new cultures and inspiring people through the visions of leaders so that the employees can share the knowledge and work toward achieving an inspiring vision.

Leaders work together with employees to achieve the organization's goals, and relationship-oriented leaders concern themselves with people and maintaining positive relationships (Ray, 1999). While value-based leadership is enthusiastic, positive, encouraging, morale modeling, motive arousing, confidence building, dynamic, convincing, visionary, inspirational, decisive, and performance-oriented, it also needs high integrity (Smith & Peterson, 2002).

Leavy and Wilson (1994) emphasize that a vision can be achieved by refocusing on the expressive perspective of leadership. Expressive perspectives are rooted in the interactions of leaders, with the context and organizational history, where the organization can begin to get a better understanding of the wellsprings of strategic vision and inspirational leadership. This understanding drives the organization in decision making processes. Therefore, leadership has great implications for vision designing and in influencing policy and decision making processes in the organization.

#### *b) Creating Culture and Structure of Knowledge Management*

Organizational culture is experienced in what it feels like to work in the organization. Researchers observed that 50 to 70 percent of the organizational culture can be traced to its leadership styles. As a result, to institutionalize sustainability in the organization, the leaders play a pivotal role in creating an advantageous culture and environment. To achieve this sustainability, the leaders must actively pursue the objective of changing the organization's culture to one that values sustainability at every level of the organization (Lussier & Achua, 2004). Thus, leadership is required in a time of crisis, and also has a capacity for all to be committed to a common purpose and to work together in a sustainable way.

The leaders create the culture of knowledge sharing in the organization and establishing structures and processes to bring the vision to realization, and monitor the outcomes of knowledge management in the organization (Nonaka & Konno, 1998). The successful leaders at each level of the organization will have a capacity to change the culture that is not underpinning knowledge sharing and management in the organization. At this point the cultural change toward sustainability requires leadership. Leaders provide a global product strategy, coordinating resource allocation and coordinating resource flows across cultures. Leaders develop "a strategy-supportive culture, create an effective organizational structure, prepare budgets, develop and utilize information systems and link employee compensation to organizational performance," (David, 2001, p.6).

#### *c) Empowering*

The organizational and human resource management development study characterizes leadership as playing an important role in empowering people. Ideally, the leaders and leadership engage employees and other stakeholders in the organization in designing a vision and mission (Joyce, 1999). However, most leaders embrace the traditional model of organizational vision and mission formulation. This is one of the critiques of this paper that the leaders have to be involved in all components of the organization to design the organizational vision and mission, so that they have the sense of ownership and responsibility in the organization.

One of the failures of program activities, including knowledge management and high turnover in the organization is the lack of a sense of ownership and responsibility of employees. For example, Stacey (2003, p.165) shows that "writers on knowledge management seem much concerned with people leaving an organization and taking their implicit knowledge with them". Therefore, the leaders and leadership must be concerned with the conversion of individual tacit knowledge into explicit form and the storing of that explicit knowledge in either centralized or distributed systems, so that employees and other stakeholders in the organization can access it.

In addition, the emphasis on value-based leadership clearly liberates individuals from excessive command and control management. This combination sustains employee focus on all the knowledge that is most critical to the success of the organization. Leadership grows from the capacity to hold creative tension when people articulate a vision and tell the truth about the reality (Senge *et al.*, 2000). This implies that every organization has many leaders because there are people at each level in the hierarchy who play critical roles in generating and sustaining creative activities. Lussier and Achua (2004, p.435) stated that "the challenge for organizational leaders is to recognize that each person can bring value and strengths to the workplace based on his or her own unique background". In relation to knowledge management initiatives, involve the organization developing a deep capacity of its entire staff to be at the forefront of knowledge and skill in supporting the teaching and learning process.

#### *d) Creating Knowledge Management System*

*An organization is acknowledged as a knowledge system and learning agent. As a result, the*

leaders and leadership should create an informed system in order to underpin knowledge management sustainability in the organization. Effective knowledge management can occur when knowledge is in a system. If knowledge is dispersed, it is difficult to manage (Alvesson & Kärreman, 2001). Knowledge management initiatives and activities should fit together as a system. Here, the roles of the leaders are to create the conditions that allow others to shift the place from which the system operates (Stacey, 2003).

Moreover, the organization today has a new understanding of management. For example, Stacey (2003, p.165) highlights that management is understood in systemic terms and the prescriptions related to design and operation of a system ensure the quality of the teaching and learning process. On this point, knowledge management emphasizes the need for devising systems and procedures in order to create, encode, diffuse, and retain the knowledge that the organization produces in program activities (Patriotta, 2003) and integrates it into a system. Integrating and synthesizing systems means providing a mechanism that supports self-organized conversion support and action-reflection units in order to capture the emergence of new meaning in changing contexts (Nonaka *et al.*, 2001).

#### e) Open to change

Building a new system of the organization requires transformational leaders who can raise the high level of group practices to its values and are able to create a common understanding and foster a willingness to change. Thus, transformational and inspirational leaders are socially daring and change seeking. Socially, skillful leaders possess high interpersonal skills, relate well with people, are good at building relationships, interact well at all levels in the organization, understand the needs of others, identify with their subordinates and are caring, flexible, and open to ideas (Khatri & Felker, 2004). Thus, leaders must be open-minded and responsive – open to change.

The organization needs new opportunities. These opportunities are to introduce change and propose the strategies to meet the strategic goals, vision and mission of the organization. Without continually expanding knowledge and understanding, it is difficult for organizations to learn how to overcome the many barriers. Leaders need the ability to analyze situations, mobilize commitment, and establish mechanisms, for change. Change becomes a learning process because it seeks to facilitate individual and organizational learning (Doppelt, 2003).

## IV. KNOWLEDGE MANAGEMENT PRACTICES IN EDUCATIONAL INSTITUTIONS

Realizing the social aspect, human beings need organizations or institutions that underpin the well-being of the members and to support them to achieve the common goals. Drawing on the theoretical basis, the organization or institution has several components in order to achieve these common strategic goals. These components are structures, leadership, management, power coalitions, common goals, and design (Mendonca & Kanungo, 2007). An organization or institution is an integrated knowledge system and the management of the organization or institution is concerned with the effective use of that knowledge (Todd & Southon, 2000).

Educational institutions, for example, have the capacity to design and construct the structure. Through this structure, the educational communities are allocated and designated a different task, role, and status levels in order to achieve efficiently and effectively a common purpose. Organizational structure implies that there are leaders (schools' principles) and followers (teachers, students). The leaders are expected to provide direction, exercise control, and generally execute such functions that are necessary to achieve the organizational objectives. The structures, mechanisms, norms and activity in the organization are to support the sustainability of the organization (Mendonca & Kanungo, 2007), including the sustainability of knowledge management in education.

This analysis is based on the conceptual basis of the organization or institution. Robbins and Barnwell (1994, p.4) conceptualized an organization as "a consciously co-ordinated social entity, with a relatively identifiable boundary, that functions on a relatively continuous basis to achieve a common goal or set of goals". This definition has a wide array of critical elements. Firstly, *consciously co-ordinated* is not only leading to management, but also to leadership and members of the organization. *Social entity* implies that there are effective and constructive interactions between members in the organization.

Another element is a *relatively identifiable boundary*. This means that organization has a clear procedure and mechanism for defining membership. The validation of this boundary is through job contract and job description. The next element is a *continuing bond*. Reflecting on the social aspect of the organization, it is important to build a close relationship and also keep in touch, even though the staff members may have left the organization. Finally, the organization has *common goals*. These goals are the strategic

direction for the organizational members and leaders, and the articulation of the organization's mission (Robbins & Barnwell, 1994).

However, the educational community needs to re-conceptualize the notion of organization in today's knowledge and knowledge management movements. The most innovative aspect of the knowledge-based approach is the re-conceptualization of the organization as knowledge architecture, knowledge-based organization (Patriotta, 2003). Prahalad and Hamel (1990) illustrated the organization as a large knowledge tree. This knowledge tree is articulated according to a series of end products, business units, core products, and core competencies. Each is reflecting in a more in-depth way the distinctive body of knowledge of an organization. Then, the ideal organization is a good place to work, a good place to share ideas, experience and knowledge (Infante, 1989) and is continually managing knowledge. Furthermore, Infante (1989, p.104) claimed that:

*A good place to work is one which engages the whole person – his or her thoughts, feelings, and, yes, even aspirations. It is a place which values diversity, and sees people's uniqueness as the seed of new ideas and possibilities. A good place to work is where people feel at ease collaborating cross-functionally and feel empowered to make decisions that are right for the organization.*

Based on the historical and philosophical grounds of knowledge management, some educational institutions have initiated knowledge management practices within the organization. There are two strategies of knowledge management in the organization. These are codification and personalization. Ideally, the codification strategy of knowledge management centers on the computers, where knowledge is carefully codified and stored in databases, where it can be accessed and used by anyone in the organization (Hansen *et al.*, 1999), in schools or universities.

In addition, codified knowledge is mostly in the form of documents, such as program reports (monthly and annually), brochures, bulletins, CD/Video programs, books and journals, organizational profile, procedures, regulations, mechanisms, and the structure and culture of the organization. In terms of the personalization strategy of knowledge management, some education institutions have applied direct person-to-person contacts (Hansen *et al.*, 1999), discussion, dialogues and meetings. The other medium of personalization of knowledge management is through communities of practice (Saint-Onge & Wallace, 2003).

## V. SUSTAINING KNOWLEDGE MANAGEMENT IN EDUCATION

### 1) *Integrating Knowledge Management to Culture and Structure of the Educational Organization*

In order to remain sustainable, knowledge management in the organization needs to be integrated into the organizational cultures and structures. These cultures and structures are, for example, the culture of rewarding and incentive for the staff for practicing knowledge management in the organization. Another example is training and education development for the staff in relation to knowledge management practices in the organization (Davenport & Prusak, 1998). In addition, the leaders and the organization need to design an organizational structure that is flatter and more flexible. The purpose of a flatter structure of an education institution is for decentralizing decision making and control in project-based, network or web-like structures, such as self-managing teams (Stacey, 2003). The flatter organizational structures give space to all in the educational community to share knowledge and experience and it can create a conducive teaching - learning process in education. However, few experts deny that the flat organizational structure and "high level of decentralized management has an embedded problem of coordination and overview, which is easier in hierarchical organizations", (Monsted, 2003, p.9). This paper would argue, though, the flat organizational structure is effective for coordination, knowledge sharing and learning processes.

Knowledge and knowledge management can also be retained in the organization in the form of individuals, contexts, mechanisms, rules, procedures and practices. Knowledge and knowledge management can be embedded in documents, repositories, organizational routines, processes, and norms (Davenport & Prusak, 1998). As a consequence, knowledge retention and dissemination is indeed imperative in every organization, especially in educational organizations. It has a great impact on organization as a learning organization; schools or university as learning organizations.

### 2) *Knowledge Management Investment*

The new understanding of knowledge management sustainability in the organization is as an investment. If knowledge management is an investment, it becomes a long-term asset of the organization. Experts argued that one of the strategies of knowledge management sustainability is that the employees and other components in the organization invest their knowledge (Stewart, 1998).



Kelloway and Barling (2000) argued, like all investors, employees expect a return on their investment. The more attractive the return, the more likely individuals are to make the investment. Moreover, the attractiveness of a return on investment is predicated by two central features, that is risk and the rate of return. Investment risk is the trust of employees in the organization. Trust has two components; cognitive and affective. The cognitive component reflects the belief that management is sufficiently skilled to justify the confidence of employees in their actions. The affective component reflects the belief that management will not do anything deliberately to harm employees.

Additionally, Kelloway and Barling (2000) explored the "rate of return" on employees' investment of knowledge in the organization which is reflected in employees' sense of affective commitment to the organization. The affective commitment reflects employees' pride in their membership of the organization, their desire to be a part of the organization, and their willingness to retain membership of the organization. Affective commitment is based on a reciprocal and exchange-based relationship between the organization and the individual. However, the organization has to be aware that, on the one hand, it concentrates on managing knowledge in a sustainable way, on the other hand, the organization has also to be continuously learning and acquiring new knowledge in order to sustain competitive advantage.

Knowledge management implies a serious struggle to regain knowledge that is lost in the past and explores new opportunities to retain and sustain knowledge in the organization in the future. Knowledge management is the process by which the organization generates wealth from its intellectual or knowledge-based asset (Bukowitz & Williams, 1999). Therefore, knowledge and knowledge management have to be an investment in education institutions.

### 3) *Learning Organization*

The new challenge for education today is the challenge of educational institutions as learning organizations. Senge (1992, p.3) defined learning organizations where "people continually expand their capacity to create the results they truly desire, where new and expansive patterns of thinking are nurtured, where collective aspiration is set free, and where people are continually learning how to learn together". Garvin (1993, p.80) described the learning organization as "an organization skilled at creating, acquiring, and transferring knowledge, and at modifying its behavior

to reflect new knowledge and insights". These definitions imply knowledge acquisition, sharing and diffusion in the organization and education as a struggle for meaning (Freire, 1985).

In the process of learning, the organization attains new knowledge and at the same time shares and disseminates that knowledge to the other employees and other stakeholders. This new knowledge comes through "tapping the tacit knowledge located in individual heads and this process of tapping is understood as translating the tacit knowledge in individual heads into explicit forms", (Stacey, 2003, p.163). At this point, knowledge and knowledge management provide the axiology, value added for the organization. Thus, the organization needs to create a systematic and holistic approach to sharing technical excellence and best practices to demonstrate added value and construct the uniqueness in the organization.

### 4) *Knowledge Visualization*

Knowledge visualization is one of the knowledge management strategies in the organization, because it stimulates the viewers to capture the meaning and create new knowledge. Practitioners have observed the effectiveness of knowledge visualization, which leads to availability, accessibility, and ease of management (Eppler & Burkhard, 2005).

The main purpose of knowledge visualization is to make use of visual representations in improving knowledge creation, diffusion and management in the organization. This supports an organization that mostly possesses knowledge which is complex, tacit, intuitive and rich (Davenport & Prusak, 1998). Knowledge visualization can be in the form of maps, cartographies, diagrams, metaphors, structures, pictures, model, spiral and storytelling (Prusak, 2005).

### 5) *Technological Solutions*

The growing process of information technology in the recent era inevitably penetrates every aspect of human life. One of these is that information technology facilitates the process of knowledge management in the organization. Information technology helps the process of connecting explicit knowledge from different sources into new systemized knowledge and allows a large number of people to participate in the process (Nonaka *et al.*, 2001). Therefore, in this context, information technology underpins the sustainability of knowledge management in the organization.



In the process of information technology operations, the tacit knowledge embodied in such tools and systems indicates the sustainability. However, if the implementation is based on tacit knowledge, the more difficult the system will be to transfer and the more uncertain and unsustainable the outcome will be (Nonaka *et al.*, 2001). At this stage, the

*need will be especially felt by leaders attempting to champion an evolution beyond document-or technology-centered knowledge-management approaches, since doing so will require the entire the organization to re-conceptualize what knowledge management means', (Wick, 2000, p. 526).*

A recent study of technology for knowledge management provided a theoretical basis for knowledge management solutions through information technology. For example, Alavi and Leidner (2001) emphasized that information technology systems are to develop support and enhance the organizational processes of knowledge creation, storage, retrieval, transfer and application. Linked to this, Stacey (2003, p.165) argued that the leaders and the organization have to develop "information technology so that knowledge held by individuals can be captured and so owned and controlled by organizations". Reasonably, the investments in information technology lead to increasing returns only if they are combined with human-centered competencies.

Knowledge management initiatives have a high percentage of activities driven by information technology. Consequently, it is important to recognize and treat information technology as an important tool for knowledge management in the organization. A constant development of new capacities in information technology makes it possible for the leaders and the organizations to integrate and process large amounts of data. People exchange data, text, images, sharing their experiences quickly and inexpensively (Reinhardt *et al.*, 2001). Apart from weaknesses, these strategies are effective in sustaining knowledge management in the organization, especially in education.

## VI. CONCLUSIONS

This paper tries to introduce and explore knowledge management conceptual framework and practices, and strategies for sustaining knowledge management in the educational context. The implications are that knowledge management has the main role as a driving force for leaders and management in designing a vision and mission in education, improving good governance, creating a conducive environment for knowledge management initiatives, empowering, open to change, decision – making process and problem - solving.

## REFERENCES RÉFÉRENCES REFERENCIAS

- 1) Alavi, M. and Leidner, D. E. (1999). Review: Knowledge Management and Knowledge Management Systems: Conceptual Foundations and Research Issues. *MIS Quarterly*, 25(1), 107-136.
- 2) Alvesson, M. and Kärreman, D. (2001). Odd Couple: Making Sense of the Curious Concept of Knowledge Management. *Journal of Management Studies*, 38(7), 995-1018.
- 3) Bell, L. (2003). Strategic Planning in Education: A Critical Perspective. In B. Davies and J. West-Burnham (Eds.), *Handbook of Educational Leadership and Management* (pp. 93-99). London: Pearson Education Ltd.
- 4) Bessant, J. (2003). *High-Involvement Innovation: Building and Sustaining Competitive Advantage through Continuous Change*. England: John Wiley & Sons Ltd.
- 5) Blackler, F. (1995). Knowledge, Knowledge Work and Organizations. *Organization Studies*, 16(6), 1021-1046.
- 6) Bukowitz, W. R. and Williams, R. L. (1999). *The Knowledge Management Fieldbook*. London: Financial Times Prentice Hall.
- 7) Byham, W. C., Smith, A. B. and Paese, M. J. (2002). *Grow Your Own Leaders: How to Identify, Develop, and Retain Leadership Talent*. USA: Prentice-Hall Inc.
- 8) Cooke, P. (2002). *Knowledge Economies: Clusters, Learning and Cooperative Advantage*. New York: Routledge.
- 9) Davenport, T. H. & Prusak, L. (1998). *Working Knowledge: How Organizations Manage What They Know*. Boston, MA: Harvard Business School Press.
- 10) David, F. R. (2001). *Strategy Management Concepts* (8<sup>th</sup> Edn.). Englewood Cliffs, NJ: Prentice Hall.
- 11) Desouza, K. C. and Awazu, K. (2005). Maintaining Knowledge Management Systems: A Strategic Imperative. *The American Society for Information Science and Technology*, 56(7), 765-768.
- 12) Doppelt, B. (2003). *Leading Change toward Sustainability: A Change-Management Guide for Business, Government and Civil Society*. UK: Greenleaf Publishing Ltd.
- 13) Eppler, M. J. and Burkhard, R. A. (2005). Knowledge Visualisation. [Online] [www.netacademy.org](http://www.netacademy.org) [Retrieved February 1, 2007].
- 14) Evers, H-D and Gerke, S. (2005). Knowledge is Power; Experts a Strategic Group. Working Paper Series, 8a. Center for Development Research University of Bonn.

- 15) Freire, P. (1985). *The Politics of Education: Culture, Power and Liberation*. Translated by Donaldo Macedo. Massachusetts: Bergin and Garvey Publishers, Inc.
- 16) Freire, P. (1996). *Pedagogy of the Oppressed*. New York: Seabury Press.
- 17) Gürbüz, T. (n.d). Knowledge Management in Education. [Online]  
<http://ttix.org/archives/2008-sessions/knowledge-management-in-education>. [June 15, 2010].
- 18) Garvin, D. A. (1993). Building a Learning Organization. *Harvard Business Review*, 71(4), 78-91.
- 19) Gilding P. (2000). Sustainability – Doing It. In D. Dunphy *et al.* (Eds.), *Sustainability: The Corporate Challenge of the 21<sup>st</sup> Century* (pp. 38-52). Australia: Allen & Unwin.
- 20) Gordon, J. (2005). Making Knowledge Management Work. *Training*, 42(8), 16-21.
- 21) Hansen, M. T., Nohria, N, and Tierney, T. (1999, March-April). What's Your Strategy for Managing Knowledge? *Harvard Business Review*, 77(2), 106-116.
- 22) Henrie, M. and Hedgepeth, O. (2003). Size is Important in Knowledge Management. *Journal Knowledge Management Practice*, August. [Online] [www.tlinc.com/article53.htm](http://www.tlinc.com/article53.htm) [Retrieved November 17, 2006].
- 23) Infante, D. (1989). The Last Word: A Good Place to Work...Works for Everyone. *Manufacturing Engineering*, July, 104.
- 24) Jones, A. M. (1994). *Creating a Learning Organization*. Unpublished PhD Dissertation. University of Warwick.
- 25) Joyce, P. (1999). *Strategic Management for the Public Service*. London: Open University Press.
- 26) Kelloway, E. K. & Barling, J. (2000, April). Knowledge Work as Organizational Behavior. *International Journal of Management Review*, 2(3), 287-304.
- 27) Khatri, N. and Felker, A. (2004). Impact of Transformational Leadership on Employee Motivation, Satisfaction, and Performance in Health Care Organizations. *The Academy of Health Services Research*, Annual Research Meeting, San Deigo.
- 28) Lave, J. (1993). The Practice of Learning. In S. Chaiklin and J. Lave (Eds.), *Understanding Practice: Perspectives on Activity and Context* (pp. 3-32). Cambridge: Cambridge University Press.
- 29) Leavy, B. and Wilson, D. (1994). *Strategy and Leadership*. London: Routledge.
- 30) Liebowitz, J. and Beckman, T. (1998). *Knowledge Organizations: What every Manager should Know*. Boca Raton, FL: St. Luci Press.
- 31) Lussier, R. N. and Achua, C. F. (2004). *Leadership: Theory, Application, Skill Development*. USA: South-Western, Thomson.
- 32) McInerney, C. (2002). Knowledge Management and the Dynamic Nature of Knowledge. *Journal of the American Society for Information Science and Technology*, 53(12), 1009-1018.
- 33) Mendonca, M. and Kanungo, R. N. (2007). *Ethical Leadership*. New York, NY: Open University Press.
- 34) Monsted, M. (2003). New Leadership Role Toward Knowledge Workers. *Paper for the LOK Conference*. Department Management, Politics and Philosophy, Copenhagen Business School. [Online] <http://www.lok.cbs.dk/images/publ/Mette%20Monsted.pdf> [Retrieved May 17, 2006].
- 35) Nevis, E. C., DiBella, A. J. and Gould, J. M. (2000). Understanding Organizations as Learning Systems. In Cross, R. L. and S. B. Israelit (Eds.), *Strategic Learning in a Knowledge Economy: Individual, Collective and Organizational Learning Process* (pp. 119-140). The United States of America: Butterworth-Heinemann.
- 36) Newell, S., Robertson, M., Scarbrough, H. and Swan, J. (2002). *Managing Knowledge Work*. New York: Palgrave.
- 37) Newman, B. (2003). Long-Term Knowledge Management: Knowledge Continuum and Long-Term Knowledge Perpetuation. [Online] <http://revolution.3-cities.com> [Retrieved March 2, 2007].
- 38) Nonaka, I., Reinmoller, P. and Toyama, R. (2001). Integrated Information Technology Systems for Knowledge Creation. In M. Dierkes, A. B. Antal, J. Child and I. Nonaka (Eds.), *Handbook of Organizational Learning and Knowledge* (pp. 827-848). New York: Oxford University Press.
- 39) Nonaka, I. and Konno, N. (1998). The Concept of "Ba": Building a Foundation for Knowledge Creation. *California Management Review*, 40(3), 40-54.
- 40) Nonaka, I. and Takeuchi, H. (1995). *The Knowledge-Creating Company*. Oxford: Oxford University Press.
- 41) O'Toole, K. M. (2004a). *Retaining Knowledge through Organizational Action*. Adelaide, Australia: Flinders University Institute of

- International Education.
- 42) Patriotta, G. (2003). *Organisational Knowledge in the Making: How Firm Create, Use, and Institutionalize Knowledge*. New York: Oxford University Press.
- 43) Prahalad, C. K. and Hamel, G. (1990). The Core Competence of the Corporation. *Harvard Business Review*, 68(3), 79-91.
- 44) Prusak, L. (2005). Storytelling in Organizations. In J. S. Brown *et al.*, *Storytelling in Organizations: Why Storytelling is Transforming 21<sup>st</sup> Century Organizations and Management*, (pp. 15-52). USA: Butterworth-Heinemann Publications.
- 45) Reinhardt, R., Bornemann, M., Pawlowsky, P. and Schneider, U. (2001). Intellectual Capital and Knowledge Management: Perspective on Measuring Knowledge. In M. Dierkes, A. B. Antal, J. Child and I. Nonaka (Eds.), *Handbook of Organizational Learning and Knowledge* (pp. 794-820). New York: Oxford University Press.
- 46) Ray, G. R. (1999). *The Facilitative Leader, Behaviors That Enable Success*. New Jersey: Prentice Hall, Inc.
- 47) Robbins, S. P. and Barnwell, N. (1994). *Organizational Theory in Australia* (2<sup>nd</sup> Edn.). Australia: Prentice Hall.
- 48) Rusanow, G. (2007). Knowledge management Lacks Full Integration into Law Firm Structure. *Information Outlook*, 11(4), 31-33.
- 49) Salo, N. (2009). The Implications of Knowledge Management Sustainability for Leadership in an Organization: An Exploration and Analysis of Leadership Theories and Knowledge Management Practices. *Journal of NTT Studies*, Vol. 1 (2), pp. 95 – 135.
- 50) Saint-Onge, H. and Wallace, D. (2003). *Leveraging Communities of Practice for Strategic Advantage*. USA: Butterworth-Heinemann.
- 51) Schueber, M. (2003). Information Management Strategy Formation in Northern Development NGOs. Institute for Development Policy and Management (IDPM), University of Manchester, UK. [Online] <http://idpm.man.ac.uk/wp/di/index.htm> [Retrieved February 9, 2007].
- 52) Senge, P. (1992). *The Fifth Discipline: The Art and Practice of the Learning Organization*. London: Century Business.
- 53) Senge, P., Cambron-McCabe, N., Lucas, T., Smith, B., Button, J. and Kleiner, A. (2000). *Schools that Learn*. London: Nicholas Brealey Publishing.
- 54) Stewart, T. A. (1998). A new way to think about employees. *Fortune*, 169-170.
- 55) Skyrme, D. J. (2003). Knowledge Management: Making Sense of an Oxymoron. [Online] [www.skyrme.com/insights/22km.htm](http://www.skyrme.com/insights/22km.htm) [Retrieved July 5, 2007].
- 56) Smith, P. B. and Peterson, M. F. (2002). Cross-Cultural Leadership. In M. J. Gannon and K. L. Newman (Eds.), *The Blackwell Handbook of Cross-Cultural Management* (pp. 217-235). London: Blackwell Publishers Ltd.
- 57) Stacey, R. D. (2003). *Strategic Management and Organizational Dynamics: The Challenge of Complexity* (4<sup>th</sup> Edn.). UK: Pretince Hall.
- 58) Stoll, L. and Earl, L. (2003). Making it Last: Building Capacity for Sustainability. In B. Davies and J. West-Burnham (Eds.), *Handbook of Educational Leadership and Management* (pp. 491-504). London: Pearson Education Ltd.
- 59) Swan, J. and Newell, S. (2000). Linking Knowledge Management and Innovation. In H. R. Hansen, M. Bichler and Mahrer (Eds.), *Proceedings of the 8<sup>th</sup> European Conference on Information System* (pp. 591-598). Vienna University of Economics and Business Administration.
- 60) Todd, R. S. and Southon, G. (2000). Knowledge Management: Key to Partnership, Learning Outcomes and Resourcing a Learning Community. *International Association of School Librarianship*, 143-154.
- 61) Tsoukas, H. and Vladimirou, E. (2001). What is Organizational Knowledge? *Journal of Management Studies*, 38(7), 973-93.
- 62) Wick, C. (2000, November). Knowledge Management and Leadership Opportunities for Technical Communicators. *Technical Communication*, 47(4), 515-529.
- 63) Wiig, K. M. (2000). Knowledge Management: An Emerging Discipline Rooted in a Long History. In C. Despres and D. Chauvel (Eds.), *Knowledge Horizons: The Present and the Promise of Knowledge Management* (pp. 3-26). Boston: Butterworth-Heinemann.
- 64) Zack, M. H. (2002). Developing a Knowledge Strategy. In W. C. Chun and N. Bontis (Eds.), *The Strategic Management of Intellectual Capital and Organizational Knowledge* (pp. 255-276). Oxford: Oxford University Press



GLOBAL JOURNAL OF HUMAN SOCIAL SCIENCE

Volume 11 Issue 1 Version 1.0 February 2011

Type: Double Blind Peer Reviewed International Research Journal

Publisher: Global Journals Inc. (USA)

ISSN:0975-587X

# Socio-Economic Aspects of Fuel Wood Business in the Forest and Savanna Zones of Nigeria: Implications for Forest Sustainability and Adaptation to Climate Change

By Adeniyi Gbadegesin, Felix Olorunfemi

*University of Ibadan, NIGERIA*

**Abstract-** Forests and forest products can play a significant role in mitigation of harmful effects of green house gas emissions. They can act as a “sink” to absorb emissions and store large quantities of Carbon for extended periods of time. Forests are also an important component of adaptation strategies needed to address continuing changes in the natural resource base that sustains our livelihoods. Sustainable forest management is thus a critical component of any policy and action programme that seeks to address the growing global concern about the impact of climate change. In this study , the socio-economic aspects of the fuel wood business is examined in selected states of the forest and savanna zones of Nigeria with a view to highlighting the effects of government policy of subsidy removal on petroleum products could have on forest sustainability and adaptation to climate change. The study was carried out in rain forest states of Osun and Ondo and the guinea savanna state of Niger in Nigeria. The study involved administering questionnaire on households, institution and small scale business enterprises, fire wood sellers and transporters. Results indicate that fuel wood remains the main source of energy for heating and cooking in the two zones. In addition , frequent increase in the price of petroleum products has pushed the price of the products beyond the reach of the poor with an attendant increase demand for fuel wood .Also, small scale business enterprise in the informal sector depend overwhelmingly on the use of the fuel wood. However, methods of fuel wood exploitation in the two ecological zones are unsustainable as people hardly plant trees to replace those removed. The implications of the government policy on forest sustainability and adaptation to climate change strategies such as community based forest management are discussed.

**Keywords:** *Fuel wood business, subsidy removal, forest/savanna, Climate change, Nigeria.*

**Classification:** *GJHSS-C FOR Classification: 050209, 050101,070504*



*Strictly as per the compliance and regulations of:*





# Socio-Economic Aspects of Fuel Wood Business in the Forest and Savanna Zones of Nigeria: Implications for Forest Sustainability and Adaptation to Climate Change

Adeniyi Gbadegesin<sup>1</sup>, Felix Olorunfemi<sup>2</sup>

February 2011

45

**Abstract** Forests and forest products can play a significant role in mitigation of harmful effects of green house gas emissions. They can act as a “sink” to absorb emissions and store large quantities of Carbon for extended periods of time. Forests are also an important component of adaptation strategies needed to address continuing changes in the natural resource base that sustains our livelihoods. Sustainable forest management is thus a critical component of any policy and action programme that seeks to address the growing global concern about the impact of climate change. In this study, the socio-economic aspects of the fuel wood business is examined in selected states of the forest and savanna zones of Nigeria with a view to highlighting the effects of government policy of subsidy removal on petroleum products could have on forest sustainability and adaptation to climate change. The study was carried out in rain forest states of Osun and Ondo and the guinea savanna state of Niger in Nigeria. The study involved administering questionnaire on households, institution and small scale business enterprises, fire wood sellers and transporters. Results indicate that fuel wood remains the main source of energy for heating and cooking in the two zones. In addition, frequent increase in the price of petroleum products has pushed the price of the products beyond the reach of the poor with an attendant increase demand for fuel wood. Also, small scale business enterprise in the informal sector depend overwhelmingly on the use of the fuel wood. However, methods of fuel wood exploitation in the two ecological zones are unsustainable as people hardly plant trees to replace those removed. The implications of the government policy on forest sustainability and adaptation to climate change strategies such as community based forest management are discussed.

**Key words:** Fuel wood business, subsidy removal, forest/savanna, Climate change, Nigeria.

*About<sup>1</sup>* - Department of Geography, University of Ibadan,

NIGERIA E-mail: adeniyig@yahoo.com

*About<sup>2</sup>* - Nigerian Institute of Social and Economic and Research, Ojoo, Ibadan, NIGERIA E-mail: felixba2000@yahoo.com

## I. INTRODUCTION

Approximately 2.5 to 3.0 billion people (40 to 50 percent of the world's total) rely on wood for fuel, both for warmth and food preparation. In Africa, wood is depended upon for upto 58% of all energy requirements and in many savanna areas, demand for wood supplies far exceeds the rate of growth (Williams, 2003). Regional analysis of the use of wood as a major source of energy requirements indicates that in Eastern, Western and Southern Africa, more than 90 percent of rural households depend on fuelwood, including fuelwood and charcoal. Nevertheless, it is pertinent to note that wood as other combustible and renewable resources were humankind's first energy sources. However, wood is more flexible than other known energy sources and thus gains supremacy over other fuel resources mainly because it costs less and in some circumstance obtained free from the environment.

In Nigeria, records of fuelwood consumption are relatively scanty and the available ones not reliable. Enabor, 1981; Onuaha, 1981; Ay, 1979 and Edu, 1981 among others have confirmed these inaccurate measures of fuelwood consumption. Most of them at best give estimates. Mendie and Sani (1991) reported that fuelwood is the most dominant and widespread source of energy used for domestic purposes in the Jos Tin mining region of Plateau State, Nigeria. And that dependence on fuelwood showed an upward trend, and is rapidly increasing since the introduction of Structural Adjustment Programme (SAP), which brought about high prices of other competing fuel sources such as gas, kerosene and electric stoves far beyond the reach of an average income earner.

Available records show that in northern Nigeria, the fuel consumption rate was given as 23.3 million cubic meters per year (Anderson and Fishwick, 1988). Although Nigeria has crude oil and gas

Volume XI Issue I Version I

Global Journal of Human Social Science



resources, the levels of gas and kerosene cookers and cooking stoves adoption are far below the levels that could make any impact. Available information in Table 1 indicate that at national level and most States in the federation shows that about 40% of heat and cooking energies are derived from fuelwood utilization in the country (FOS, 1992). The situation is worsened by the ever increasing prices of the alternative energy sources following the gradual withdrawal of subsidy on

petroleum products accompanied by the depreciated value of the Naira.

Although, the alternative energy sources are renewable and versatile, they have proven unacceptable to several households in Nigeria because the traditional fuels (especially firewood etc) are safe, convenient and more reliable in terms of supply. With the gradual removal of subsidy on petroleum products since 1986 in the country, the pressure on fuelwood has been so intense.

**Table 1:** Percentage distribution of households by type of commonest fuel used in selected States of Nigeria

State	Electricity	Gas	Kerosene	Wood
Anambra	-	8.3	62.0	2
Kwara	1.2	-	33.3	9.7
Lagos	-	0.8	99.2	6
Niger	0.4	6.8	14.8	5.0
Ogun	-	0.4	79.8	0
Ondo	-	0.8	47.3	.0
Oyo	-	0.7	68.2	7
Rivers	-	5.4	40.1	8.0
All Nigeria	1.5	2.7	56.0	1
				9.9
				4
				9.8
				3
				0.4
				5
				4.5
				3
				9.7

Source: Federal Office of Statistics (FOS), Lagos, 1992

Elkan, (1988) asserted that reforestation efforts have failed because commercial production of fuelwood cannot compete with 'free' wood from common lands. However, he maintains that prices of fuelwood will inevitably, rise as free fuelwood is exhausted and that only increases in incomes especially of the lower income groups will protect them from increase in the cost of cooking. In addition, literature on the economics of deforestation tend to suggest that economic growth which raises the income level of the population will induce a switch from fuelwood to kerosene or other higher forms of energy and thus reduce deforestation associated with fuelwood demand. Interestingly, today the cost of kerosene and some other alternative sources of energy both in the west and central Africa is not very different from the cost of fuelwood in the cities. Using data from Ghana and a simple linear model, Abakah (1990), investigated the link between real incomes, inflation and fuelwood consumption. His regression analysis

indicates that the quantity of fuelwood consumed is negatively correlated to real incomes and positively related to inflation levels.

The disturbing aspect of fuelwood extraction is that it can hardly be replaced. Farmers, research institutes and afforestation and reforestation programmes concentrate mainly on substitution of indigenous plants with exotic and economic trees, herbage, legumes and other shrub plants. Therefore, it is unusual to allow the regrowth or reestablishments of indigenous and naturally occurring plants. However, the role played by forestry as an important sector of the agricultural sector in providing fuelwood, industrial wood and other products is often not adequately captured by official statistics.

Climate change, biodiversity and forest loss are cross-cutting issues that need to be addressed simultaneously and urgently for adaptation in Africa especially with other emerging global challenges

fueling food crisis. The synergy between adaptation to climate change and biodiversity conservation requires a unifying strategy to enhance the sustainability of the forest resource pools on which poor communities directly depend for their livelihoods (Nkem et al, 2008). This approach has recently been acknowledged in discussions on cooperation between conventions within the Convention for Biological Diversity (CBD) and the United Nations Framework Convention on Climate Change (UNFCCC). Both of which have stressed the need for common approaches to their national implementation, which also provides a cost-saving option for African countries.

Effects of climate change on forests are clearly transboundary in nature. Several studies and predictive models have strongly emphasized the vulnerability of African tropical forest biodiversity to various climate change scenarios, and the resulting direct consequences on wildlife population and the livelihoods of humans. Protecting forests against them and adaptation of forest management should therefore be further explored. Adaptation strategies should encourage the conservation of habitats and biodiversity (fauna and flora) that underlies livelihood adaptation especially in rural areas. Also, there is need to provide and support participatory and open multi-stakeholders discussion platform that encourages the integration of biodiversity conservation into mainstream climate change adaptation strategies, and beyond protected areas. Given the rate of fuelwood exploitation in most developing countries, this study, therefore, becomes very relevant given the fact that for forests, several impacts of climate change are relevant and need consideration. Also, new calls for intensification of forest management, mainly for bioenergy development is crucial especially for African countries.

Therefore, this study focuses on socio-economic aspect of fuelwood business in selected states of forest and savanna ecological zones of Nigeria with a view to highlighting the effect of government policies of removal of subsidies of petroleum products and its effects on forest sustainability and adaptation to climate change. This study, a follow-up to the 1996 study by Akintola et al is justified in view of increasing rate of forest exploitation and its implications for forest sustainability and adaptation to climate change.

## II. METHODOLOGY

The study utilized primary data collected by means of questionnaire administered to respondents in the two study areas Ijebu-Jesa/Efon Alaiye in Ondo State and Minna in Niger State). The questionnaires were of three types. One was administered to firewood sellers. Another set to households and the third set

were administered to institutions and small scale enterprises. The questionnaires were administered to both randomly and purposively to selected respondents. The analysis of the data in the two sampled ecological zones for 1983 and 1993 relied on an earlier study carried out by Akintola et al (1996). Although the data for 2007 were collected from the same sampled areas, the study did not use the same sampled population used by Akintola et al, (2007). In addition, secondary data on the prices of kerosene was collected from the Nigeria National Petroleum Corporation (NNPC).

For the households survey, a total of 200 questionnaires were administered in Ijebu-Jesa/Efon Alaiye while another 200 were administered in Minna. For the firewood sellers, a total of 50 were administered in Ijebu-Jesa/Efon Alaiye while 100 questionnaires were administered in Minna. The disparity in the number of questionnaires administered to this category of respondents in the two areas is due to the fact that there more firewood sellers in savanna ecological zone represented by Minna than forest ecological zone represented by Ijebu-Jesa/Efon Alaiye. For the third category of respondents used in this study that is the small-scale enterprises/institution 24 establishments were sampled in Ijebu-Jesa/Efon Alaiye while a total of 27 establishments were sample in Minna.

For the 2007 data, the same categories of respondents were surveyed similar to Akintola et al (ibid) study. However, smaller sample size was collected. For the household survey a total of 50 questionnaires were administered in each of the two study location as a follow-up to the earlier study by Akintola et al (ibid). For the firewood sellers, a total of 30 questionnaires were administered in Minna, while 20 questionnaires were administered in Ijebu-Jesa/Efon Alaiye. However, 10 establishments each were sampled in the two locations.

The data collected were analysed using the Statistical Package for Social Scientists (SPSS). The data and results were presented in tables composed of simple frequencies and percentages. It should be noted that only the questionnaires that were good enough for analysis were used for the study.

## III. THE STUDY AREAS

The study was carried out in two areas namely: Ijebu Jesa and Efon Alaiye areas of Osun and adjoining Ekiti States and Minna areas of Niger State. The Ijebu Jesa and Efon Alaiye are in the rainforest region and Minna in the guinea savanna region of Nigeria. Ijebu Jesa (Lat 2°8'N Long 5°E) is located in Osun State while Efon Alaiye (Lat 2°8'N Long 5°3'E) in Ekiti State. Both areas are characterised by a rolling topography with fairly extensive ridges of quartzite

rising above the gernal land surface. The two areas are characterized by the same climate (tropical rain forest, Koppen's Af climate) and both areas are underlain by acid, crystalline rocks of the basement complex formation. The climate is characterized by wet and dry seasons with the former lasting from March or April to October. Annual rainfall generally ranges between 1300 and 200 mm with over 80% of the rains falling during the wet season. Temperature are high throughout the year with a n annual average of about 26.6°C.

The soils in the area are Ferruginous Tropical soils formed from crystalline acid rocks. Their main features include a sandy surface horizon underlain by a weakly developed clayey, mottled, and occasionally concretionary sub soil. These soils are generally considered to be of high natural fertility, although traditional management practices have caused some problems in their utilization for crop production. They are sensitive to erosion and occasional waterlogging as a result of the clayey sub soil. The soils are of medium productivity class and of good potentials (Agboola, 1979).

The natural vegetation of Ijebu Jesa area is moist semi deciduous rain forest (Hopkins 1974) Most of the original forest has been cleared to establish cocoa plantations and farms of field crops consisting mainly of cassava inter cropped with maize and yams. Today, the occurrence of natural forest is largely restricted to wet valleys, the landscape consisting mainly of a mosaic of cocoa plantations, cassava farms and regenerating bush fallow vegetation.

Minna (Lat 5°10'N, long 7°E) is located within the guinea savanna ecological zone of Nigeria. The area is characterized by igneous and metamorphic rocks of the Basement Complex formation. The climate of the area is sub humid tropical climate with marked wet and dry seasons. The wet season starts from April and lasts till September. The remaining six months of the year, that is, from October to March are characterized by the dry season. Highest rainfall is obtained in August and the annual rainfall usually ranges between 1000 and 1300 mm. Temperature is high throughout the year with no marked seasonal for monthly departure from the annual average of about 27°C.

As with the rainforest zone, the soils in Minna area are ferruginous tropical soils. Their general characteristics are broadly similar to those of Ijebu-Jesa/Efon Alaiye area having been formed from similar parent materials. However, because the soils in Minna area are formed under guinea savanna vegetation, they usually contain less organic matter. Consequently, their water holding and cation exchange capacities are

usually lower than similar ferruginous soils in the rainforest region of Ijebu-Jesa/Efon Alaiye.

The vegetation of Minna area is southern Guinea savanna characterised by tall grasses particularly those belonging to the genera *Andropogon*, *Hyparhenia* and *Pennisetum*. Typical trees include *Lophira lanceolata*, *Annogeissus leiocarpus*, *Azelia Africana* and *Daniellia oliveri*. In intensively farmed areas, particularly around large settlements, the vegetation is degraded into tree or shrub savanna. In areas where population pressure on land is not great, savanna woodlands are characteristic.

## IV. RESULTS AND DISCUSSIONS

### 1) Socio-economic Characteristics of the People

Generally, the people in the two zones are largely rural. Over 40% of the people in both zones are concentrated in the rural areas. The survey conducted for this study indicates that majority of the households has 3-8 persons. This relatively large household size has implication on rural energy consumption pattern. A significant number of the men have more than one wife, presumably in order to provide more hands for agricultural activities. Besides majority have more than two children per household in both Niger and Osun/Ekiti States. Literacy level is, however, higher in Osun/Ekiti States than Niger State. This may probably affect the possibility of acceptance of alternative sources of fuel/energy.

Farming is by far the most important occupation in Niger State, with almost 60% of the respondents in the area engaged in the profession, while in the Southern (forest) zone, the bulk of the people (accounting for 46.2%) are engaged in services with only 21.1% being farmers.

In both the savanna and forest ecological zones, the traditional system of shifting cultivation is prominent. Simple farm implements such as the hoe, cutlass and axe are used in farming operations. In the forest zone, crops grown include cassava (*Manihot spp*), maize (*Zea mays*), cocoyam (*Colocasia esculenta*), yam (*Dioscorea spp*) and rice (*Oryza sativa*). Multicrop farming and intercropping systems are commonly practiced. In Niger State the common crops grown are sorghum, rice, some root crops such as yam and cassava.

Since a significant proportion of the people in the study areas are rural farmers, the rural income accruing to a family is low. Over 74 and 68.4% of the

households surveyed in Niger State and Osun/Ekiti States respectively earn less than N90,000.00 per annum (i.e less than \$800 per annum).

In terms of ethnicity, the Yorubas are the dominant ethnic group in Ijebu Jesa and Efon Alaiye areas. A number of migrants including Ibos, Urhobos and Ebiras live amongst the Yourbas to provide farm labour and also engaged in other activities such as

tapping of palm wine and collection of palm produce. The Gwaris are the dominant ethnic group in Minna although Hausa is the primary language of communication. A number of migrant communities of Yorubas, Ibos and other ethnic groups also inhabit the area. The socio-economic characteristics of the respondents are presented in Table 2.

Table 2: Socio-economic characteristics of the respondents (percentage)

No. of persons per household		Minna	Ijebu-jesa/Efon Alaiye
	1-2	4.5	15.0
	3-8	69.0	40.1
	<9	19.5	26.8
	No response	7.0	18.1
	Total	100.0	100.0
Level of education	No formal education	26.0	19.1
	Quranic education	12.0	4.5
	Primary education	15.5	32.2
	Secondary education	29.5	21.6
	Post-secondary education	16.01	21.1
	No response	1.0	1.5
	Total	100.0	100.0
Occupation	Trading	3.5	9.0
	Farming	59.5	21.1
	Services	14.5	46.2
	Teaching	7.0	15.1
	Civil service	14.5	7.0
	No response	1.0	1.6
	Total	100.0	100.0
Farm sizes (Hectares)	<1	37.0	31.2
	1-5	31.0	20.1
	5-10	6.0	144.6
	>10	2.5	3.5
	No response	23.5	30.6
	Total	100.0	100.0
*Annual income (₦)	<90,000	4.0	9.0
	90,001-140,000	32.5	39.3
	140,001-190,000	3.5	20.1
	190,001-240,000	11.5	25.5
	>240,001	6.0	0.0
	No response	8.5	6.0
	Total	100.0	100.0

Sources: Akintola et al (1996) and 2007 survey by Authors

\* Note – the current exchange rate is N118 to \$1

## 2) Household Energy Utilization

Table 3 shows the proportion of households using fuelwood, kerosene, electricity, gas and charcoal as their major sources of energy in Minna and Ijebu-Jesa/Efon Alaiye between 1983 and 2007. Major source of energy is defined here as the energy

consumed most and used most frequently. In the guinea savanna area of Minna, fuelwood is the most popular source of energy for domestic uses. Only a small proportion of the population utilize electricity, kerosene and gas (11.0%, 15% and 3.6% respectively) as their major energy source as depicted in Table 3.

However, the situation in Ijebu-Jesa/Efon Alaiye presents a scenario which sharply contrasts with that of Minna area respect to the pattern of household energy utilization. Unlike the guinea savanna zone, an overwhelming proportion of people in Ijebu-Jesa area do not depend on fuelwood as their major source of energy. The use of Kerosene is fairly popular in the in the forest zone with almost half of the respondents (46.2%) depending on kerosene as the major source of energy compared to only 15.0% in Minna as at 2007. The unusually low proportion of people using fuelwood in Ijebu-Jesa/Efon Alaiye area is presumably due to two reasons. First, the Ijebu-Jesa/Efon Alaiye is apart of the cocoa belt of south Western Nigeria. This area is one of the most agriculturally productive areas of Nigeria and for several decades cocoa production has been a

major source of wealth for the people. The people in the rural areas, although generally poor, are usually better off financially than rural dwellers in most parts of the country. As a result of the relative affluence of people in Ijebu-Jesa area they can afford to use Kerosene as the dominant fuel for heating and cooking unlike those in the guinea savanna zone of Minna who do not produce any major cash crop. Second, owing to the dominance of cocoa in the agricultural economy of the Ijebu-Jesa/Efon Alaiye area, vast areas of rainforest have been cleared and replaced by cocoa plantations which are not a source of fuelwood. Most of the fuelwood supplies of the Ijebu-Jesa/Efon Alaiye area have to be obtained from distant places and this substantially increases the cost of the commodity relative to that of kerosene.

Table 3: Pattern of household energy utilization in Minna and Ijebu-Jesa/Efon Alaiye

	Minna			Ijebu-Jesa/Efon Alaiye		
	1983	1993	2007	1983	1993	2007
Fuel type	%	%	%	%	%	%
Fuelwood	69.6	68.1	70.2	38.9	24.1	34.5
Kerosene	16.8	16.8	15.0	39.5	49.2	46.2
Electricity	12.0	12.6	11.0	20.5	19.5	11.0
Gas	1.6	2.6	3.6	1.1	7.2	8.3
Charcoal	0.0	0.0	0.2	0.0	0.0	0.0
Total	100.0	100.0	100.0	100.0	100.0	100.0

Sources: Akintola et al (1996) and 2007 survey by Authors

While there was no significant change in the proportion of people using fuelwood in Minna area between 1983 and 2007, in the Ijebu-Jesa/Efon Alaiye area, there was a decline in the proportion of people using fuelwood as their major fuel in 2007 relative to 1983. This is despite the fact the prices of kerosene has increased several fold in the country due to the removal of subsidies on petroleum products by the federal government.

In relative terms, none of the households surveyed use charcoal as their major source of energy for heating and cooking. It is hardly surprising that households in our two study areas do not use charcoal as their main source of energy. This is because, although, charcoal can be more easily transported being lighter in weight, it is more expensive than fuelwood. Besides, charcoal has lost part of its original energy value during the process of converting fuelwood to charcoal. In addition, charcoal tends to heat more slowly than fuelwood or commercial fuels and it is not convenient to use charcoal for heating or cooking.

### 3) Energy Utilization by Institutions and Small Scale Business Enterprises

Institutions and the small scale enterprises including roadside foodstands (popularly known as "bukatarias"), 'suya' spots, bakeries, and blacksmithing make an important contribution to the total quantity of energy consumed in both the urban and rural areas. A single bukataria may cater for as much as 100 persons per day, that it about 10 – 15 times the size of an average household, implying that energy consumption by the informal sector is considerably high. Similarly, a single bakery using fuelwood may consume as much as a pick up load of firewood (about 500 to 800 kg) per week.

Table 4 shows the pattern of energy consumption by institutions and small scale enterprises sampled in the two ecological zones. Fuelwood is the major form of energy used by institutions and small scale enterprises in Minna (75.0%) and Ijebu-Jesa/Efon

Alaiye (91.5%) Given the widespread use of kerosine as the main source of energy for cooking and heating by households in Ijebu-Jesa/Efon Alaiye area, it is rather surprising to note that fuelwood is the main source of energy utilized by small scale enterprises operating in the area.



**Table 4:** Pattern of energy utilization by institutions/small scale enterprises in Minna (in percentages)

	Minna			Ijebu-Jesa/Efon Alaiye		
Fuel type	1983	1993	2007	1983	1993	2007
Firewood	66.7	66.7	75.0	87.5	77.8	91.5
Charcoal	19.4	19.0	10.5	8.3	7.4	5.5
Electricity	8.3	7.1	2.5	0.0	0.0	0.5
Kerosene	0.0	2.4	8.0	4.2	11.1	1.0
Gas	5.6	4.8	5.0	0.0	3.7	1.5
Total	100.0	100.0	100.0	100.0	100.0	100.0

Sources: Akintola et al (1996) and 2007 survey by Authors

In spite of shortage of fuelwood in the cocoa producing area of the forest ecological zone, most of the small scale enterprises depended on fuelwood as their main energy source (Table 4). The unusually high dependence of informal sector activities on fuelwood rather than on commercial fuels in both the rain forest and savanna regions appear to be due to the following factors.

First, small scale enterprises in the informal sector are essentially profit oriented. In order to maximize profits, they tend to use the cheapest and most reliable fuels (in this case fuelwood). Second, as pointed out earlier, periodic and chronic shortages of commercial fuels such as gas and kerosene are experienced in the country from time to time. An entrepreneur such as 'akara' seller or one who operates a fast food stand (eg. Suya spot) or a bukararia who depends mainly on kerosene or gas will be forced to close his business from time to time when there is shortage of commercial fuels (Akintola et al, 1996). Third, although electricity is available in many urban and in some rural areas, blackouts sometimes lasting for days, weeks or even months are common. Hence, most small scale enterprises operating on a commercial basis, tend to depend overwhelmingly on fuelwood which is available throughout the year and can be bought in small or large quantities as and when required.

Unlike the pattern of household energy consumption, the high dependence of small scale enterprises on fuelwood is a major source of concern for forest sustainability and adaptation to climate change. This is due to the relatively high quantity of fuelwood consumed by small scale enterprises daily. This has a lot of implications on the existing high level of deforestation in the two zones. This informs further investigation into fuel wood business in the study areas.

#### 4) *Socio – Economic Aspects of Firewood Business*

One of the primary objectives of this study is to evaluate some socio economic aspects of the fuel wood business in the study areas with a view to highlighting the effects of government policy of subsidy removal from commercial fuels on the trade and consumption of fuel wood. Owing to data problems very important aspects of the fuelwood business could not be evaluated. In particular, firewood sellers did not answer questions relating to the volume of firewood sold. Also, most of them did not provide quantitative answers to questions relating to price per unit of sale of fuel wood. These problems arose partly because fuel wood sellers do not normally keep records of sale of fuelwood. Similarly, fuel wood transporters were unable to supply quantitative data on the cost of transporting a unit weight of fuelwood. The implication of the foregoing is that it was difficult to assess whether or not the fuelwood trade has become more profitable since the gradual removal of subsidy on petroleum products over the years. This section considers some socio-economic aspects of firewood trade focusing on locational characteristics of fuelwood seller, how long they have been in the fuelwood business, units of selling fuelwood and who they sell fuelwood to.

#### 5) *Locational Characteristics Fuelwood sellers*

There is ready market for firewood in both urban and rural areas. Villages which were self sufficient in fuelwood in the past, with each family meeting its firewood requirement from its farmland, are no longer so. This is particularly so in villages located near large cities or in areas in the rain forest zone where cash crops such as cocoa are grown on land which would have otherwise served as a source of fuelwood. Consequently, trade in fuelwood which used to be restricted to the major urban centres is now a feature of relatively small villages. Table 5 shows where firewood sellers are based in our two study areas.

Table 5: Location of fuelwood sellers in Ijebu-Jesa/Efon Alaiye and Minna

Location	Ijebu-Jesa/Efon Alaiye		Minna	
	Number of sellers	Percentage	Number of sellers	Percentage
Rural	16	40.0	49	55.7
Semi urban	12	30.8	8	9.1
Urban	11	28.2	31	35.2
Total	39	100.0	88	100.0

Sources: Akintola et al (1996)

In the rain forest region of Ijebu-Jesa/Efon Alaiye, only about 40% of firewood sellers are based in the rural areas while in the Guinea savanna region of Minna, most of the wood sellers are based in the rural areas. This discrepancy is presumably attributable to the fact that south western Nigeria, of which Ijebu-Jesa/Efon Alaiye are a part, is the most urbanized part of Nigeria. The area contains a higher proportion of

people living in towns than in any other part of the country. Since there is highly urbanized, with a relatively lower proportion of the people living in rural areas, it is not surprising therefore, that most of the fuelwood sellers in Ijebu-Jesa/Efon Alaiye are based in urban and peri urban areas. Table 6 shows the location of the fuelwood selling depots.

Table 6: Location of fuelwood – selling depots Ijebu-Jesa/Efon Alaiye and Minna

Location	Ijebu-Jesa/Efon Alaiye		Minna	
	Frequency	Percentage	Frequency	Percentage
Outside the village/town	3	7.2	8	8.5
Inside the town	12	28.6	20	21.3
Sellers' residence	10	23.8	42	42.0
In a market	1	2.4	4	4.3
Others	8	19.0	4	4.3
Non response	8	19.0	16	17.0
Total	42	100.0	94	100.0

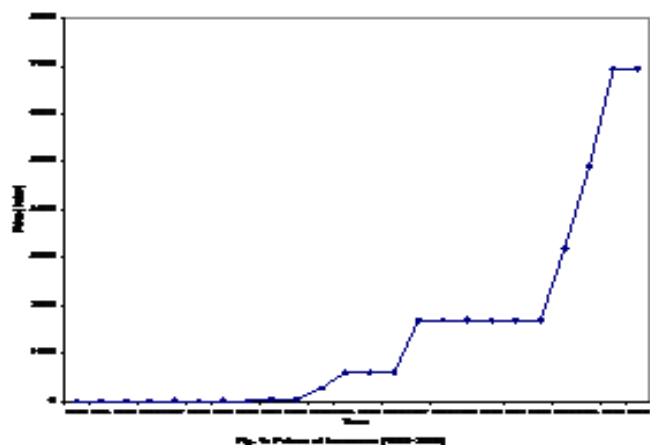
Source: Akintola et al (1996)

Most fuelwood sellers use depots located within their settlements where they can use stores or simply stack the bundles of fuelwood in front of their residence. By operating from within settlements or near their residence, fuelwood for sale is safeguarded against would be pilferers. Also, locating the fuelwood depot at or near owner's residence is a way of ensuring that at least someone is around to attend to buyers who may come at awkward times (eg. at night) to buy fuelwood when they run out of supply while cooking. This is also to ensure easy access to buyers. Only a small proportion of fuelwood sellers operate from the market, usually less than 5% of sellers. Some fuelwood sellers do not have a fixed firewood selling depot. They are mobile vendors who sell fuelwood from house to house. These mobile vendors categorized as 'others' in Table 6 usually have some customers who they supply fuelwood at fairly regular intervals.

#### 6) Effects of Subsidy Removal on the Prices of Fuelwood

Figure 1 shows the official price of kerosene in Nigeria from 1983 to 2006. The price of kerosene was

stable between 1983 and 1990 until it began to increase from 1992. By 2006, the price has increased by 6,519% of its 1983 value. The astronomical increase in the price of kerosene has implications for fuelwood consumption in the country as a whole and in the study areas in particular. For example, while the price of a bundle of fuelwood was N2.70 in Ijebu-Jesa and Efon Alaiye area in 1983, the price was N150 as at 2006. This represents an increase of 5,456%. In Minna, the price of a bundle of fuelwood was N2.40. This jumped to N110 in 2006 representing an increase of 4,483%. The increase in the price of fuelwood is largely attributable to the progressive devaluation of the naira since 1983 and government policy of periodically increasing the price of commercial fuels (including kerosene) which has brought about increased cost of transporting fuelwood to the points of consumption or sale.



## V. DO FUEL WOOD USERS PLANT TREES?

The answer to this question is crucial for assessing whether or not the exploitation of fuelwood in our study areas is sustainable. If fuelwood users in both the study areas have woodlot where they plant fast growing tree species for use as fuelwood, there will be

less pressure on natural forests and savanna woodlands. For instance, in Burkina Faso, a sizeable proportion of the people in Ougadougou who use fuelwood as their main source of energy for heating and cooking, plant trees within and around the city to meet part or the whole of their fuelwood requirements (Pouya, 1994). In the present study, fuelwood users interviewed were asked whether they plant trees on their farms and the purpose of which they plant trees.

In the rain forest area, only 16% of the households using fuelwood admitted having planted trees on their farms. In guinea savanna area, the corresponding proportion of households that planted trees was 47.5%. This suggests that the people in the savanna region, where trees are smaller and fewer, generally appreciate the need to plant trees to combat the problems of environmental deterioration and possibly meet their fuelwood requirements more than those in the rain forest region. The purpose of planting trees in farmland is not necessarily to provide fuelwood or augment fuelwood supplies from secondary forests or tree savanna vegetation and savanna woodland as the Figure 2 clearly shows.

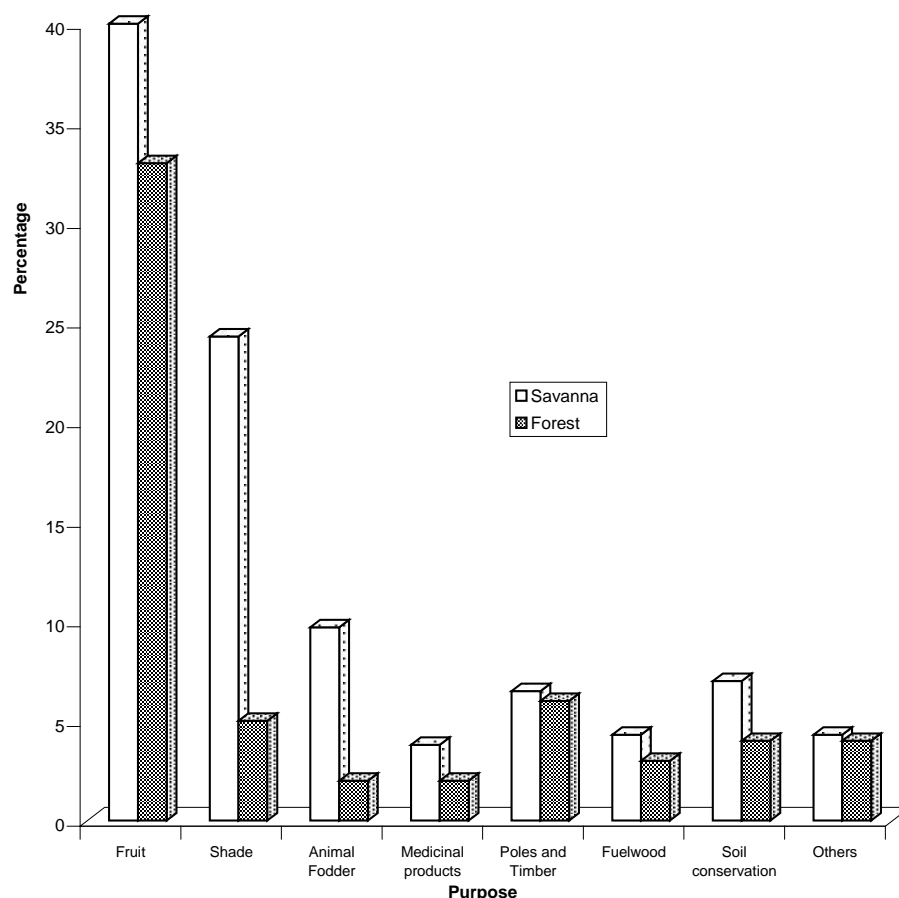


Fig. 2: Purpose of Planting Trees by Fuelwood Users i Savanna and Rain Forest Ecological Zones of Nigeria



Trees were planted mainly to produce fruits and to provide shade on the farm. Fuelwood production ranked among the least mentioned reasons for planting trees in both the guinea savanna and rain forest study areas. Fuelwood production accounted for less than 6% of the total responses in respect of the reasons for planting trees while production of fruits ranked highest accounting for 40.0% and 55.9% of the responses in the savanna and forest areas respectively. Since fruit, shade or medicinal trees are not usually felled for fuelwood, it follows therefore, that the vast majority of fuelwood exploiters do not grow trees for fuelwood and hence, the method of fuelwood exploitation is unsustainable. This is particularly so as there is no conscious attempt by fuelwood exploiters to plant trees to replace those felled for fuelwood. They regard fuelwood as a free gift of nature which they do not need to waste their time to produce in woodlot managed by them.

## VI. IMPLICATIONS OF FIREWOOD BUSINESS FOR DEFORESTATION AND CLIMATE CHANGE

Some aspects and dynamics of the fuelwood business discussed above have implications for deforestation. It was observed that for both the rain forest and guinea savanna zones, the percentage of small scale enterprises using fuelwood has increased by more than 80% in both zones. This suggests a boom in the fuelwood business which is indicative of increased rate of deforestation.

The increase in the percentage of fuelwood users among small scale enterprises was more in the rain forest region than in savanna region. This presumably suggests that the rate of deforestation in the rain forest region may be higher than in the guinea savanna region. It was pointed out in the previous sections that the proportion of households using fuelwood actually declined in the rain forest region (Ijebu-Jesa/Efon Alaiye). Most likely, the increased deforestation in the area is due to the fact that small scale enterprises depend on fuelwood as their primary energy source. The implication of this is that measures designed to reduce the rate of deforestation should not only address fuelwood consumption by households but largely fuelwood utilization by small scale enterprises in the informal sector.

## VII. CONCLUSION

Fuelwood is the major energy utilized for heating and cooking in the study areas with kerosene and electricity assuming secondary importance. Since 1994, government has increased the price of kerosene, gas and petrol several fold, relative to the price levels in 1993. These latter 'reduction' in energy subsidy has pushed the price of commercial fuels to outrageously high levels with the result that most of the urban poor and rural dwellers cannot afford to buy commercial fuels such as kerosene and gas. This is particularly so if the size of their households large. It may well be that since the 1994 rise in the price of commercial fuels, many people have resorted to the use of fuelwood which is relatively cheap compared to commercial fuels.

As Gbadegesin (1995), has rightly observed the gradual removal of subsidy on petroleum products has heightened the problems of environmental degradation in Nigeria. It seems that the informal sector which is profit oriented is more sensitive to the price of commercial fuels than individual households where convenience in the use of fuels may assume greater significance, subject to the proviso that the price of commercial fuels is within the range they can afford. Even in the rain forest part of the study areas where the use of kerosene is popular among households, small scale businesses depend predominantly on the use of fuelwood. As a result of an increase in population over time and the rising cost of commercial fuels, the demand for fuelwood has increased also. The amount of fuelwood produced in the whole country on an annual basis has increased substantially since the removal of subsidy. Fuelwood collectors now have to travel longer distances to obtain firewood than they used to do as the fuelwood resources of the areas around settlements are now largely depleted.

Fuelwood exploitation in both the forest and savanna regions is unsustainable as most fuelwood collectors do not plant trees to replace those removed from the vegetation for fuelwood. Less than 20% of fuelwood collectors/users in the rain forest region admitted they ever planted trees. In the guinea savanna region around Minna, the proportion of those who grew trees was considerably higher. Even so, those in the guinea savanna region do not grow trees for fuelwood but mainly for fruits and to provide shade on the farm. Growing trees for fuelwood accounted for less than 6% of the reasons given for planting trees in both ecological zones. This is a pointer to the fact that most fuelwood collectors regard firewood as a free gift

of nature. The obvious implication of this is that fuelwood exploitation will continue to lead to environmental degradation and consequently induce climate change unless government takes urgent steps to reverse the trend of a growing demand for fuelwood over time. This will necessarily involve policy measures that will encourage people to switch to the use of commercial fuels, especially kerosene. The periodic scarcity of commercial fuels especially of gas and kerosene, the epileptic supply of electricity and the frequent several fold increase in the price of commercial fuel will most likely militate against widespread switching to the use of commercial fuels by the people.

Deforestation, partly resulting from unsustainable fuelwood exploitation is exacerbating problems of environmental degradation especially desertification and soil erosion and loss of biodiversity in the more humid guinea savanna and rain forest regions. These environmental problems may ultimately result in soil impoverishment or outright loss of the productive topsoil with an attendant decline in vegetation cover of the areas. This will consequently cause forest ecosystems to change in various ways, such as in animal and plant species distribution, changes in tree physiology and stability. This will manifest itself in stand-level effects, as well as in major disruptions or disasters caused by more dramatic weather events. Therefore, forest protection and management will have to assure that these effects can be foreseen, managed and limited to the greatest extent possible, particularly due to the very long production and ecological cycle of forests.

Therefore, it is of utmost importance that government should address the problem of unsustainable fuelwood exploitation so that our land will continue to be productive and be able to support present and future generations of Nigerians. It is also important that government develops and encourages the people to use alternative sources of energy, especially biogas and solar energy. The development and utilization of solar energy at the household level in the Sudan and Sahel savanna zones will help to reduce and possibly reverse the trend of increasing desertification.

Adaptation strategies should encourage the conservation of habitats and biodiversity (fauna and flora) that underlies livelihood adaptation especially in rural areas. Also, there is need to provide and support participatory and open multi-stakeholders discussion platform that encourages the integration of biodiversity conservation into mainstream climate change adaptation strategies. Given the current global economic crisis, it would be very difficult to continue to

subsidize the consumption of commercial fuels. Therefore, all stakeholders should encourage the cultivation of woodlots in order to stem the increasing rate of depletion of natural forests given the fact that fuelwood remain the major source of energy in the rural areas.

## REFERENCES RÉFÉRENCES REFERENCIAS

1. Abakah, E.M. (1990) "Real Incomes and Consumption of Woodfuels in Ghana". *Energy Economics* Vol. 12, No. B, pp. 227-231.
2. Agboola, A. (1974) *Agricultural Atlas of Nigeria*, Heinemann, Ibadan
3. Akintola, F.O., A.O. Aweo, A.S. Gbadegesin and M.M. Daura (1996) "Rural Energy Consumption Patterns and Deforestation in Nigeria". Working Paper No. 9, NISER/SSCN, Ibadan, Nigeria.
4. Anderson, D. and R. Fishwick (1988) "Fuelwood Consumption and Deforestation in African Countries". *World Bank Staff Working Papers*, No. 704.
5. Ay, P. (1979) Fuel and charcoal in West African Forest. Field Research in Western Nigeria: *Rural Energy System in Humid Tropics: Workshop Proceedings* (S.B. Morgan, R.D. Moss and G.J.A. Ojo). Ile-Ife, pp. 44-48.
6. Edu, N.E. (1981) Consumption of Domestic fuel in Jos Town, Unpublished M.Sc. Thesis, University of Jos.
7. Elkan, W. (1988) "Alternatives of fuelwood in African Towns". *World Development*. Vol. 16, 527-533.
8. Enabor, E. (1981) "Meeting the Demand for forest products in Nigeria: A Critical Review of Policy". *The Journal of Forest Association of Nigeria*, Vol. 2(1), pp. 49-53.
9. Gbadegesin, A. (1995) SAP and Women's Management of Forest Resources: A Case Study of Olokemeji Forest Reserve Area, S/Western Nigeria. *LASU Social Science Journal*/Vol. 3, pp. 7-20.
10. Hopkins, B. (1974) *Forest and Savanna*, Heinemann, London.
11. Kirsten Ulrud, Linda and Karen O'Brien (2008) "More Than Rain: Identifying Sustainable Pathways for Climate Adaptation and poverty Reduction." *Global Environmental Change and Human Security*. The Development Fund/Utviklingsfondet, p. 3.
12. Mendie, A. and A. Sani (1991) "Problems and Issues in Afforestation: A Case Study of Fuelwood Situation in the Jos Tin Mining



Region". A Paper Presented at the International Workshop on Ecology and Society in the History of the Sahel and Savanna, Centre for trans-Saharan Studies, University of Maiduguri.

13. Nkem, J., M. Idinoba, M. Brockhaus, F Kalame, and A. Tas (2008) "Adaptation to Climate Change in Africa: Synergies with biodiversity and forests". Note prepared as a contribution to the scoping paper on adaptation in Africa prepared by SEI and UNEP for the African Ministerial Conference on Environment (AMCEN). Accessed from [http://wikiadapt.org/index.php?title=Adaptation\\_and\\_biodiversity\\_synergies](http://wikiadapt.org/index.php?title=Adaptation_and_biodiversity_synergies)
14. Ogbonna, D.O (1991) "Energy Challenge and Ecological Balance in the Sahel and Semi-Arid Zone of Nigeria. A Paper Presented at the International Workshop on Ecology and Society in the History of the Sahel and Savanna, Centre for trans-Saharan Studies, University of Maiduguri.
15. Onuaha, K.M. (1981) How to Improve the Rural Energy Situations in Nigeria. *Daily Times*, May 28, p. 7.
16. Pouya, A.M. (1994) Managing Woodland in the Sahel. *Haramata* No. 24, pp. 8-9.
17. Siri Eriksen, Karen O'Brien and Lynn Rosentrater (2008) "Climate Changes in Eastern and Southern Africa: Impact, Vulnerability and Adaptation." Global Environmental Change and Human Security, Department of Sociology and Hyman Geography, University of Oslo. Report 2, p. 1.
18. Williams, M. (2003) Deforesting the earth from Prehistory to Global Crisis. "American Forests". University of Chicago Press.



GLOBAL JOURNAL OF HUMAN SOCIAL SCIENCE

Volume 11 Issue 1 Version 1.0 February 2011

Type: Double Blind Peer Reviewed International Research Journal

Publisher: Global Journals Inc. (USA)

ISSN: 0975-587X

# Determinants of Age at First Sexual Intercourse for Youths of Nepal

By Mukesh Kumar Mishra

*NIMS College T.U*

**Abstract-** The largest number of youth population in Nepal's demographic history has drawn attention regarding their behaviours, particularly sexual behaviours. This study examines predictors of sexual behaviours of youths using the data from Nepal Demographic and Health Survey 2006. Background characteristics - place of residence, level of education, ecological region, caste/ethnicity and wealth index are used as predictors of sexual behaviour. Level of education, geographical location and caste/ethnicity are found to have significant influence on sexual behaviour. But the effects are not uniform for male youths and female youths. Geographical location and family characteristics tend to have strong influence on female youths while not for male youths. Though education is important factor to influence sexual behaviour, the effect diminishes with the increase in age at first sexual intercourse. Meanwhile other factors like caste/ethnicity, geographical region become effective to determine sexual behaviours. Gendered differences in sexual practices are observed implicitly in caste/ethnic groups. Terai Hindu female youths are more likely to enter in sexual activities before or at 18 years than Hill Hindu women, on contrary to, Terai Hindu male youths who are less likely to enter in sexual activities before or at age 18 years their hill counterparts. These marked differences require attention to address the deferential sexual behaviours among youths in order to ensure safer sex and sexuality.

**Classification:** *GJHSS-A FOR Classification: 940113, 200205*



*Strictly as per the compliance and regulations of:*



# Determinants of Age at First Sexual Intercourse for Youths of Nepal

Mukesh Kumar Mishra

February 2011

**Abstract**—The largest number of youth population in Nepal's demographic history has drawn attention regarding their behaviours, particularly sexual behaviours. This study examines predictors of sexual behaviours of youths using the data from Nepal Demographic and Health Survey 2006. Background characteristics - place of residence, level of education, ecological region, caste/ethnicity and wealth index are used as predictors of sexual behaviour. Level of education, geographical location and caste/ethnicity are found to have significant influence on sexual behaviour. But the effects are not uniform for male youths and female youths. Geographical location and family characteristics tend to have strong influence on female youths while not for male youths. Though education is important factor to influence sexual behaviour, the effect diminishes with the increase in age at first sexual intercourse. Meanwhile other factors like caste/ethnicity, geographical region become effective to determine sexual behaviours. Gendered differences in sexual practices are observed implicitly in caste/ethnic groups. Terai Hindu female youths are more likely to enter in sexual activities before or at 18 years than Hill Hindu women, on contrary to, Terai Hindu male youths who are less likely to enter in sexual activities before or at age 18 years their hill counterparts. These marked differences require attention to address the differential sexual behaviours among youths in order to ensure safer sex and sexuality.

## 1. BACKGROUND

The outspread bulge of youth population in global demographic composition is demanding cautious attention to focus on behaviours of youth population than ever before. The demographic indicators at the advent of 21st century show positive direction in many developing countries to facilitate the demographic transition. Fertility and mortality rates are decreasing considerably, despite few exceptions, thereby contributing to increase in life expectancy. Ages at marriage and first birth have gone up. Use of contraceptive manipulated by increasing level of education, information, health advancement, economic development and cultural transformation has become a powerful proximate determinant to guide fertility behaviours along with sexual activities. The wide spread use of contraception is claimed to have increased premarital and extra-marital sexual relationships. The increasing age at marriage, contrasting to early marriage in the past, has increased the age at first sexual

intercourse among the youths in many countries of the world, if not premarital sexual activities considered.

There are arguments that as the differential fertility or mortality or nuptiality is observed, differential sexual experiences of youth are observed, either marital or non-marital. Age at entry to sexual relationship is determined primarily by social, cultural and legal grounds on which youths are living. The differences between perceived and observed values by youths have made them experimental (Pokharel and Subedi, 2007) which paves way for sexual experimentation. Entry into first sexual union may take place within a marital union or non-marital union. In many developing countries where age at marriage is considerably lower, youths are more likely to experience sexual activities within in marital union (Bruce, 2002) than pre-marital union. But with the increase in the age at marriage, the pattern and practices of sexual activities among youths have considerably been changing. There is emerging debate whether the sexual practices are consensual within marital or non-marital union. Less attention is paid for non-consensual sexual practices in which youths are involved in (Jejeebhoy and Bott, 2005).

Youths' experiences of sexual practices are diverse and depend on many factors including one's sex, place of residence, socio-cultural context, economic circumstances and marital status (UNFPA, 2005), encircled by different social pressures - values and norms of community to which individuals belong (Billy et al., 1994) - affecting their ability to approach sexuality responsibly (UNFPA, 2000). Guided by the country specific characteristics, in some parts of the world, sexual activity begins during adolescents and often risky whether within or outside marriage (WHO, 2004). Parental characteristics, family relationships and attitudes, values and norms of the family have also been associated with sexual behaviour of youths. Gray and Stainberg (1999) argued since the family values and norms provide specific perspective on the meaning of sexuality (Ongaro, 2001, op cit.), youths design their sexual practices within the contextual framework.

The sexual experiences of male and female youth vary largely. A large proportion young females experience intercourse in marital union in contrast to

57

Volume XI Issue I Version I

Global Journal of Human Social Science

large proportion young males experiencing in non-marital (premarital) union. The timing of sexual initiation and continuation varies widely by country and gender (UNFPA, 2000; Ghuman et al., 2006). Worldwide, a large majority of sexually experienced males aged 15-19 are unmarried compared to two-thirds or more sexually experienced females of the same age group are married. Adolescent girls who marry early are not exposed to premarital sex having the later years of adolescence when premarital sex is more likely to take place (Choe et al., 2004). Ongaro (2001) claimed that since first sexual intercourse is becoming more and more a young person's event, the family, with its (material and nonmaterial) resources, contributes to the creation of opportunities that young people have to spend on the "market" of meetings with the other sex.

### 1) *Youths' Sexual Behaviour in Nepal*

Alike the global demographic composition, youth population (15-24 years) comprises the highest proportion (19.38%) ever in the demographic history of Nepal (Aryal and Adhikari, 2003). Studies on sexual behaviour of youths in Nepal largely depend on the convenient sample and/or specific group of population. Demographic and Health Survey (DHS) has recently started to collect information on sexuality through nationally representative sample. Sexual activity in Nepal within married youths is common (MoH, New ERA and ORC Macro, 2002); whilst premarital sexual activity is gaining momentum (Pradhan and Strachan, 2003). The relatively lower age at marriage of girls compared to boys indicate most of the girls practice sexual activity within the marital union whereas the proportion of boys practicing sexual activity outside the marital union, particularly premarital sex, is noticeably increasing since last few years.

Sexual activity in Nepali youths is, by and large, explained by the socio-cultural and economic dimensions. Sexuality is less discussed and exposed. Despite the tremendous development of and exposure to communication media, the youth behaviours are being changed as an impact of modernization. The changes are observed markedly in urban youths than rural youths; the rural youths being not isolated of change. The median age at marriage for women was observed to be 16.6 years in 2001 which increased to 17.2 years in 2006 whereas the corresponding figures for men are 19.7 in 2001 and 20.2 years in 2006. Interestingly, the age at first sexual intercourse for females was 16.7 years in 2001 and 17.2 years in 2006 which is higher (or equal in 2006) than the median age at marriage showing that a large majority of females

practice sexual activities in marital union. But, in contrast, the age at first sexual intercourse to males was 18.8 years in 2001, nearly lower by one year than median age at marriage, and 19.6 years in 2006, nearly lower by half a year, admitting that the premarital sexual activities are taking places (MoH, New ERA and ORC Macro, 2002 and 2007). Though less discussed and researched, 15 percent of Nepali male and less than a percent female adolescents are estimated to have premarital sexual activities (Choe et. al., 2004), which is argued to increase consistently over the years.

Sexual behaviours of Nepali youths are less explored and documented. The DHS 2006 provides a few elaborated sexual behaviours of youths for the first time. The DHS 2006 confirms sexual behaviours of Nepali youths vary across the social, economic, cultural, ecological and urban-rural sub-groups. Both, median age at first marriage and age at first sexual intercourse, for example, are higher for urban youths (20-24 years age group) compared to rural youths for both males and females. The median age at first marriage for urban women (current) aged 20-24 was 19.0 years whereas the corresponding figure for rural women is two years less (17.0 years). Same discrepancy is observed for male - 23.4 years for urban men against 20.4 years for rural men with the current age 25-29 years. With more disaggregate analysis, 7.5 per cent women with current age 15-24 years reported to have sexual intercourse before age 15. The percentage increases considerably to 47 percent to women aged 18-24 who have had their first sexual intercourse by age 18. Examining the men's behaviour, a relatively lower percentage (4.0%) claimed to have sexual intercourse by the age 15 among the 15-24 years men whereas the percentage increases to 27 by the age 18 among the 18-24 years men.

The point of analysis, despite the lower percentage of youths involved in sex in earlier than 18 years compared to females, is a large proportion of men claimed to have premarital sexual practices. Nearly three per cent never married men aged 15-24 years are sexually active by age 15, the proportion increases to 13.1 per cent by the age 18 among 18-24 years never married youths. But the proportion of females is considerably low, almost less than 1 per cent (MoH, New ERA and ORC Macro, 2007).

Not only, the proportion of youths involved in premarital sexual activity is increasing, they are equally practicing risky sexual activities. The same survey disclosed that use of condom among youths during the first sexual intercourse is considerably low. Only 5.3 per cent women of age group 15-24 who have ever had

sexual intercourse admitted to have used condom in the first sexual intercourse but the corresponding figure is higher for men, 25.7 per cent. Condom use pattern is higher for urban youths, youths having SLC and above level of education and from higher income quintile. Nearly half of the never married youths who have had sex did not use condom in the first sexual intercourse (MoH, New ERA and ORC Macro, 2007).

## II. OBJECTIVES OF STUDY

On the grounds that along with the demographic, socio-economic, cultural and political transitions in Nepal, sexual behaviours of youths (15-24 years) are expected to be changed remarkably. Increase in the age at marriage, wide availability and accessibility of contraceptive and increasing sexually sensitive activities through different sources, many youths are thought to sexually active in fairly young age, often in premarital sexual union. This paper attempts to explore the factors that determine sexual behaviours of youths concentrating on age at entry into sexual union. Affects of background characteristics - place of residence, household income, level of education, ecological zone and caste/ethnicity - of youths on age at entry into sexual union are explored to verify against the hypothesis that background characteristics affect sexual behaviours of youths.

## III. DATA AND METHODS

### 2) Data

The study is concentrated to discover the determinants of age at first sexual intercourse among the Nepali youths. Youth population is defined as the population in the age group 15-24. Data from Nepal Demographic and Health Survey (NDHS) 2006 are used for this analysis. The NDHS 2006 provides more disaggregated information on sexual behaviour of youths for the first time. A trend analysis is not possible while the earlier surveys largely lack information on sexuality of youths. NDHS 2006 has interviewed 10,793 women in the age group 15-49 and 4,397 men of the age group 15-59. However, this study is concerned to age group 15-24 which is characterised as youth population. The 15-24 years population is classified into two broad categories respective to objective - 15-24 and 18-24 to determine the probability of having had first sexual intercourse before or at 15 or 18 years of age respectively. The sample population included in the study, therefore comprises 4,431 women aged 15-24 and 2,916 women aged 18-24 whereas the corresponding sample for men is 1,573 for age group 15-24 and 985 for age group 18-24.

### 3) Methods

#### a) Dependent variables

For making the analysis comparable and traceable, two categories of age classification - 15 years and 18 years have been used. Based on which two groups (four categories) are formed - i) having sexual relationship earlier than or at 15 or 18 years of age (coded as '1') and ii) not having sexual relationship earlier than 15 or 18 years of age (coded as '0'), hence, forming a dichotomous dependent variable. The reasons for using 15 and 18 as classifying year are i) age 15 is used to measure the probability of having sex at early age or pre-reproductive age, ii) age 18 is, therefore, selected it is the legal age of marriage for both sexes with the consent of parents and iii) age 18 is also considered as bridge age of transition from adolescence to adulthood.

#### b) Independent variables

Background characteristics of individuals - sex, place of residence, level of education, ecological region of origin, caste/ethnicity and wealth index are considered as independent variables based on the results produced by NDHS 2006. As discussed earlier, age at first sexual intercourse is hypothesized to be influenced by sex of individual, place of residence (rural-urban), level of education (illiterate - SLC and above), ecological region of enumeration (Mountain, Hill and Tarai), caste/ethnicity (Hill Hindu, Tarai Hindu, Janjatis/Nationalities, Newar, Muslim and Dalits/untouchables), and wealth index (Lowest-Highest quintile). Probability of having had or not having had sexual intercourse before or at 15 or 18 years age is compared against each reference category of each background characteristic.

#### c) Models

Having classified the dependent variable in dichotomous form, binary logistic regression is the appropriate model to identify the relative risk of having had or not having had sex earlier than or at age 15 or 18 years. In logistic regression, the dependent variable is transformed into the natural logarithm of the odds of being in one category versus the other and the model provides estimates that fit independent variables to the logistic response function (Ongaro, 2001). Four logistic regression models are fit - each for male and female for estimating the probability of having sex before or at 15 and 18 years of age by background characteristics.

Considering the probability of having had first sexual intercourse before or at age 15 for females having certain background characteristics is expressed as:





$$P_{fsi \leq 15, f} = E \left( Y = \frac{1}{X_i + \dots + X_n} \right) = \frac{1}{1 + e^{-(\beta_1 + \beta_2 X_1 + \beta_3 X_3 + \dots + \beta_n X_n)}} \dots \dots \dots (1)$$

Where  $P_{fsi \leq 15, f}$  is the probability of having had first sexual intercourse before or at age 15 for females with  $X_i \dots \dots \dots X_n$  set of characteristics (explanatory variables).

Rewriting in logit form and replacing by the actual set of characteristic variables, the equation (1) becomes,

$$Y_i = \ln \left( \frac{P_{fsi \leq 15, f}}{1 - P_{fsi \leq 15, f}} \right) = \beta_1 + \beta_2 PR_i + \beta_3 EDU_i + \beta_4 ER_i + \beta_5 CE_i + \beta_6 WI_i + u_i \dots \dots \dots (2)$$

Where PR is place of residence, EDU is level of education, ER is ecological region of enumeration, CE is caste/ethnicity, WI is wealth index and  $u_i$  is error term.

The model specification for males having had first sexual intercourse before or at age 15 years is same like as the equation (2) when  $P_{fsi \leq 15, f}$  is replaced with  $P_{fsi \leq 15, m}$ , which is the probability of having had first sexual intercourse before or at age 15 for males. When the reference age for having had or not having had first sexual intercourse is changed from 15 years to 18 years the other two models can be constructed in the similar procedure as equations (1) and (2).

The logit model producing the odds ratio given by:

$$\frac{P_{fsi \leq 15 \text{ or } 18, f \text{ or } m}}{1 - P_{fsi \leq 15 \text{ or } 18, f \text{ or } m}}$$

This relation explains the probability of having had first sexual intercourse before or at age 15 or 18 for males and females which is very similar to the odds ratio obtained by  $\frac{P_i}{(1-P_i)}$  - the ratio of the probability of having had to the probability of not having had first sexual intercourse before or at age 15 or 18 for both females and males.

#### IV. RESULTS

Results are summarized based on the four different models with each model having five explanatory variables introduced in each successive attempt, thus, forming a huge set of interactive models result. Table 1 shows the odds ratio of having had first sexual intercourse before or at age 15 or 18 years for men 15-24 and 18-24 as explained by the individual characteristics.

Table 1: Determinants of age at first sexual intercourse for male youths 15-24 and 18-24: dichotomous odds ratio

Covariates	Odds ratio for having first sexual intercourse before or at age 15 for male youths age 15-24	Odds ratio for having first sexual intercourse before or at age 18 for male youths age 18-24
Place of residence		
Rural ®		
Urban	1.340	0.845
Level of education		
No education ®		
Primary education	0.496**	0.959
Some secondary	0.450**	0.723
SLC and above	0.069***	0.375***
Ecological region		
Mountain ®		
Hill	0.924	0.609
Tarai	0.819	0.490**

Caste/ethnicity		
Hill Hindu caste ®		
Anabatic/Nationalities	0.667	1.099
Tarai/Hindu caste	0.325**	0.514**
Newar	1.166	0.430**
Muslim	0.994	0.901
Dalits (Occupational caste)	1.381	1.847**
Wealth quintile		
Lowest ®		
Second	1.424	1.214
Middle	0.882	1.063
Fourth	1.233	0.912
Highest	1.028	0.967
Nagelkerke R Square	0.100	0.146

\*\*\*p<0.01, \*\*p<0.05, \*p<0.10

For estimating probability of having had first sexual intercourse before at age 15 or 18 for male youths aged 15-24 and 18-24 respectively, five socio-economic and spatial variables - place of residence, level of education, ecological region, caste/ethnicity and wealth quintile- are introduced. Of five covariates, level of education and caste/ethnicity are found to have partial influence for having had first sexual intercourse. For example, compared to no education, male youths (15-24 years) with some secondary (OR = 0.450,  $p<0.05$ ) and SLC and above (OR = 0.069,  $p<0.001$ ) are less likely to have first sexual intercourse before or at age 15. A similar trend is observed for male youths aged 18-24 for having had first sexual intercourse before or at age 18. Compared to male youths (18-24 years) with no education, those having SLC and above level of education are less likely to have first sexual intercourse before or at age 18. The reasons, though not known, may be speculated that increasing level education increases age at marriage which consequently increases age at first sexual intercourse.

Caste/ethnicity is another covariate having influence on sexual behaviour of male youths. Compared to male youths (15-24 years) from Hill Hindu caste, Tarai Hindu caste (OR = 0.325,  $p<0.05$ ) are less likely to have first sexual intercourse before or at age 15. When the probability of having first sexual intercourse by age 18 is analyzed, the Newars enter with significantly lower probability (OR=0.430,  $p<0.05$ ) compared to Hill Hindu caste. Whilst the Dalits (occupational caste) (OR=1.847,  $p<0.05$ ) are more likely to have first sexual intercourse before or at age 18. The possible reasons for caste/ethnicity differential

on sexual behaviour largely depend on the socio-economic and cultural differences of each group. However, the exact reasons are unknown and a further research is suggested. The small values of R square suggest characteristic variables included in the model have little influence on sexual behaviour of male youths.

Table 2 summaries the odds ratio of having had first sexual intercourse before or at age 15 or 18 years for female youths 15-24 and 18-24 as explained by the individual characteristics. Alike to male, five characteristic variables are included in the model. For female youths (15-24 years) place of residence, education status and caste/ethnicity tend to have close influence on sexual behaviour. Contrasting the general understanding, female youths (15-24 years) from urban area (OR=1.405,  $p<0.05$ ) are more likely to experience first sexual intercourse before or at age 15 compared to rural female youths. The possible reason is though not explored; a cautious explanation is suggested to sample and increasing sexual debut. But urban-rural differential turns insignificant to age 18 which demands a further investigation in sexual activities. Education is another most influential factor determining the sexual behaviour of female youths. For example, female youths with SLC and above level of education are nearly 98 percent less likely to have first sexual intercourse before or at age 15 (OR = 0.021,  $p<0.001$ ) than those with no education. But effect of education gradually reduces when the age at first sexual intercourse increases from 15 to 18 years. Only the education beyond SLC is likely to affect age at entry in sexual practices.

Table 2: Determinants of age at first sexual intercourse for female youths 15-24 and 18-24: dichotomous odds ratio

Covariates	Odds ratio for having first sexual intercourse before or at age 15 for female youths (15-24 years)	Odds ratio for having first sexual intercourse before or at age 18 for female youths (18-24 years)
Place of residence		
Rural ®		
Urban	1.405**	1.003
Level of education		
No education ®		
Primary education	0.721***	1.146
Some secondary	0.306***	0.835
SLC and above	0.021***	0.716**
Ecological region		
Mountain ®		
Hill	0.889	1.119
<i>aerial</i>	0.944	2.120***
Caste/ethnicity		
Hill Hindu caste ®		
<i>Anabatic</i> /Nationalities	0.773**	0.773***
<i>Tarai</i> Hindu caste	1.269	2.654***
<i>Newar</i>	1.040	1.033
Muslim	1.053	2.873***
<i>Dalits</i> (Occupational caste)	1.554***	1.572***
Wealth quintile		
Lowest ®		
Second	0.923	1.022
Middle	1.030	1.092
Fourth	1.120	0.800
Highest	1.272	0.590***
Nagelkeke R Square	0.136	0.282

\*\*\*p<0.001, \*\*p<0.05, \*p<0.1

Table 2 further explains that ecological region becomes influential when age at first sexual intercourse increases from 15 years to 18 years. Female youths (18-24 years) from Tarai are more than 100 percent likely to enter into sexual relationship compared to mountain dwellers (OR=2.120, p<0.001) which is consistent with Tarai Hindu caste women who are more than 150 percent likely to enter into sexual relationship before or at age 18 than Hill Hindu caste women (OR=2.654, p<0.001). As general expectation, young

Muslim women (OR = 2.873, p<0.001) and Dalits (occupational caste) (OR = 1.572, p<0.001) are more likely to enter in sexual relationship before or at age 18 compared to reference category - Hill Hindu caste women. Effect of economic class is also observed in case of female youths, which is not observed for male youths. Female youths from the highest wealth quintile are less likely to experience sexual relationship before or at age 18 compared to those from the lowest wealth quintile (OR=0.590, p<0.001). However, the effect of other wealth quintile is not observed.

## V. DISCUSSION AND CONCLUSION

Sexual behaviour of young people is influenced by contextual variables. Young people in Nepal, in general, are sexually active in their teenage years (UNDP, 2003) but sexuality of this group is less addressed. The background characteristics determine the attitude towards marriage and sexual relationship. The decreasing age at puberty and increasing age at marriage is leading to initiate premarital sexual relationships (UNFPA, 2004; WHO, 2000). This study shows that effect of contextual factors is more pronounced in female sexuality compared to male. However, education is proven factor to determine sexual behaviour of young people in countries where early marriage is prevalent and sexual intercourse is largely practiced as marital activity. But the effect of education decreases gradually when the age at first sexual intercourse increases. Analogously, education differential in sexual debut is expected, especially for women. Increase in each year of schooling is expected to reduce the probability of marrying at younger age, consequently reducing the probability of entering in sexual activities. Concurrently, ecological region and caste/ethnic orientation become influential, which is symbolic to the cultural and social practices of marriage system.

More female youths are likely to enter in sexual activities in younger ages than male youths. The most powerful determinant of sexual activities for young people, particularly in case of Nepal, is claimed to be marriage. The median age at first marriage is almost 2 years less for females than males. The mean age at first sexual intercourse for women is identical to age at marriage whereas men are likely to initiate sexual practices earlier the marriage. Though, is beyond the scope of this study, male youths are found to be inclined towards premarital sexual activities.

Young Tarai Hindu, Muslim and Dalits (occupational caste) women are more likely to involve in sexual activities earlier than Hill Hindu women, mainly because of the marriage system they practice. But a different but significant difference is observed in Janjatis/Nationalities women, who are less likely to experience first sexual relationship before or at age 15 or 18 compared to Hill Hindu women. The ethnic difference in sexual activities is attributed to differential norms and practices regarding marriage and sexuality. Except a case in female youth, wealth index is not found to have significant influence on sexual behaviour of youths.

The case of male youths is slightly different. For example, male youths from Tarai region are less likely to have sexual intercourse at age 18 compared to Mountain male youths. This finding is contrasting the

female youths who are found to be more likely to initiate sexual activities compared to their mountain counterparts. Analogous behaviour is observed to Tarai Hindu male youths against the Hill Hindu male youths. Probably the reasons may be the cultural differences in marriage system - both groups are culturally (religiously) extreme. Gender differences still exist - female youths' sexual behaviour is influenced by geographical and family context where that of male youths is not (Ongaro, 2001).

Some issues have been raised by this study. Sexual activities at younger age in youths have several implications be that marital or non-marital. It hinders social and economic development of youths. The decreasing synchronization between age at marriage and first sex shows youths are at risk. If the sex is unprotected and premarital, it generates several impediments in the lives of youths. Youths may be at risk of unwanted pregnancy, risky births and many births. Further, premarital sexual relationship may increase risk for sexually transmitted disease including HIV and AIDS.

Attention is required on the differential sexual behaviours in order to promote healthy sexual practices among youths. Considering the education as an important factor that prevents early sexual practices, especially, for female youths, it should be promoted markedly considering the ecological and caste/ethnic differences.

## REFERENCES RÉFÉRENCES REFERENCIAS

1. Aryal, RH. & UP. Adhikari, 2003, "Adolescents and Youth in Nepal", *Population Monograph of Nepal Vol. II*, (Kathmandu: Central Bureau of Statistics).
2. Billy, J., K. Brewster & W. Grady, 1994, "Contextual Effects on the Sexual Behaviour of Adolescent Women", *Journal of Marriage and the Family* 56, 387-404.
3. Bruce, J., 2002, *married Adolescent Girls: Human Rights, Health and Developmental Needs of a Neglected Majority*, Paper presented at the United Nations Special Session on Children, New York, 10 May.
4. Choe, MK., SH. Hatmadji, C. Podhisita, CM. Raymundo & S. Thapa, 2004, "Substance Use and Premarital Sex Among Adolescents in Indonesia, Nepal, the Philippines and Thailand", *Asia-Pacific Population Journal*, (Bangkok: ESCAP), Vol. 19, No. 1.
5. Ghuman S., VM. Lol, VT. Huy & J. Knodel, 2006, "Continuity and Change in Premarital Sex in Vietnam", *International Family Planning Perspectives*, 32(4):166 174.

6. Jejeebhoy, S.J., & S. Bott, 2005, "Non-consensual Sexual Experiences of Young People in Developing Countries: An Overview", in S.J. Jejeebhoy, I. Shah and S. Thapa (eds.) *Sex Without Consent: Young People in Developing Countries*, (London: Zed Books).
7. Ministry of Health (MoH), New ERA & ORC Macro, 2002, *Nepal Demographic and Health Survey 2001*, (Kathmandu: MoH, New ERA and ORC Macro).
8. \_\_\_\_\_, 2007, *Nepal Demographic and Health Survey 2007*, (Kathmandu: MoH, New ERA and ORC Macro).
9. Ongaro, F., 2001, *First Sexual Intercourse in Italy. A Shift Towards an Ever More Personal Experience?*, Paper presented on the XXIV General Population Conference, Salvador (Brazil) 18-24 August 2001, (Italy: University of Padova).
10. Pokharel, T., & Y.P. Subedi, 2007, *Analyzing Risk Taking Behaviour of Conflict Induced Internally Displaced Adolescents and Youths: A Case Study of Pokhara Valley, Nepal*, (Pokhara: Pokhara University).
11. Pradhan, A., & M. Strachan, 2003, *Adolescent Reproductive Health in Nepal: Status, Policies, Programmes and Issues*, (Kathmandu: POLICY Project).
12. United Nations Development Programme (UNDP), 2003, *HIV/AIDS and Development in South Asia 2003*, (New Delhi: UNDP).
13. United Nations Population Fund (UNFPA), 2000, *State of World Population 2000: Lives Together, Worlds Apart*, (New York: UNFPA).
14. \_\_\_\_\_, 2004, *State of World Population 2004: The Cairo Consensus at Ten*, (New York: UNFPA).
15. \_\_\_\_\_, 2005, *State of World Population 2005: The Promise of Equality*, (New York: UNFPA).
16. World Health Organization (WHO), 2000, *Progress in Reproductive Health Research*, (Geneva: WHO), No. 53.
17. \_\_\_\_\_, 2004, *Reproductive Health Strategy*, (Geneva: WHO).





GLOBAL JOURNAL OF HUMAN SOCIAL SCIENCE  
Volume 11 Issue 1 Version 1.0 February 2011  
Type: Double Blind Peer Reviewed International Research Journal  
Publisher: Global Journals Inc. (USA)  
ISSN: 0975-587X

# Sexual Behaviour and Perception of Hiv/Aids in Nigerian Tertiary Institutions: University of Ilorin, a Case Study

By Fawole A. O., Ogunkan D.V, Adegoke G.S.

*University of Technology, Ogbomoso, Nigeria*

**Abstract-** This study is provoked by high prevalence of HIV/AIDS in Nigerian tertiary institutions. It examined the level of awareness of HIV/AIDS and sexual behaviour of the students of University of Ilorin, Nigeria. The study utilized both primary and secondary data. The primary data were obtained through questionnaires administration on randomly selected student of the institution. Secondary data used were obtained from published materials. The data, presented in percentages revealed high level of awareness and knowledge of HIV/AIDS among students. In spite of this, students were found to be involved in risky sexual behaviour. The reasons adduced to institutional failures, the basis upon which recommendations were offered.

**Keywords:** HIV/AIDS, sexual behaviour, awareness, knowledge, tertiary institutions.

**Classification:** GJHSS-C FOR Classification: 130308



*Strictly as per the compliance and regulations of:*



# Sexual Behaviour and Perception of HIV/AIDS in Nigerian Tertiary Institutions: University of Ilorin, a Case Study

Fawole A. O.<sup>1</sup>, Ogunkan D.V<sup>2</sup>, Adegoke G.S.<sup>3</sup>

**Abstract-** This study is provoked by high prevalence of HIV/AIDS in Nigerian tertiary institutions. It examined the level of awareness of HIV/AIDS and sexual behaviour of the students of University of Ilorin, Nigeria. The study utilized both primary and secondary data. The primary data were obtained through questionnaires administration on randomly selected student of the institution. Secondary data used were obtained from published materials. The data, presented in percentages revealed high level of awareness and knowledge of HIV/AIDS among students. In spite of this, students were found to be involved in risky sexual behaviour. The reasons adduced to institutional failures, the basis upon which recommendations were offered.

**Keywords:** HIV/AIDS, sexual behaviour, awareness, knowledge, tertiary institutions.

## I. INTRODUCTION

In recent decades, HIV/AIDS has become a topical issue in Nigeria. Ever since the first case of AIDS was registered in 1982, the epidemic has continued to be on increase. For instance, an estimated 5.1% - 5.4% of the population has been infected with HIV/AIDS by 1999 (Penchard et al, 2002) and by 2006, 6.1 millions of 140 millions population is living with HIV/AIDS. The situation becomes worrisome as the number of people with the disease is expected to grow significantly by the end of 2010 (ICI, 2002). Despite the pandemic nature of HIV/AIDS, it was not until 2000 that the Nigerian government recognised HIV/AIDS as a major health problem (FRN, 2000). Unfortunately, this was not immediately matched with intensified campaign on HIV/AIDS by governments at all level. However, the recent happenings indicate government sudden interest in fighting the scourge. Government mounted aggressive campaign in the media and posted billboards in cities and highways, sensitising on the dangers of the disease, modes of transmission and prevention. There have also been responses from non-governmental organisations in this campaign.

Despite these concerted efforts by government and non- governmental organisations to address the problem, it is disheartening to note that the rate of infection is still very high.

In Nigeria, as in other countries of the world, youths are the most vulnerable since they are the most sexually active population and have shown to have multiple sex (Okpani and Okpani, 2000, Ibe and Ibe,2003, Juarex and Martin,2006; Demilson, 2008). Current statistics on HIV/AIDS in Nigeria provide evidences that young people within the age bracket of undergraduates are the high risk group (UNAIDS, 2000). The reasons that have been adduced to number of factors which include lack of communication between parents and child about sexually; high level of illicit sexual; high incidence of campus prostitution, poverty or hash economic conditions among other factors (Obinna,2005, Uzokwe,2008)

With the conception of high prevalence of rate of HIV/AIDS among students of tertiary institutions in Nigeria, one is left wondering if the students are aware of the disease and if various campaigns on HIV/AIDS have any impact on them. Nigeria tertiary institutions present a situation whereby everybody is aware of the deadly virus HIV/AIDS (Omoriegie, 2002; Adedimeji, 2003) but they all seem not to care. Students give in easily to peer pressure, physical attractiveness etc. to affect their sexual behaviour. This study, therefore, examines the level of HIV/AIDS awareness and its impact on sexual behaviour of students of Nigerian tertiary institutions with University of Ilorin as a case study.

## II. OBJECTIVES OF THE STUDY

This study investigates the level of awareness of HIV/AIDS and sexual behaviour of students in university of Ilorin, Nigeria. This is with the view of establishing the relationship between their level of awareness of HIV/AIDS and their sexual behaviour. The objectives will be realised by answering these questions.

- (i) What kinds of sexual behaviour exist among students of tertiary institutions in Nigeria?

*About<sup>1</sup>- Department of Sociology, university of Ilorin, Ilorin, Nigeria*

*About<sup>2</sup>-Department of Urban and Regional Planning, Ladoké Akintola University of Technology, Ogbomoso, Nigeria*

*About<sup>3</sup>- Ministry of Women Affairs, Birnin Kebbi, Nigeria*

*E – Mail address: ogunkansvictor@yahoo.com*

- (ii) To what level are students of tertiary institutions in Nigeria aware of HIV/AIDS?
- (iii) Is there any relationship between the level of awareness of HIV/AIDS and their sexual behaviour?

### III. LITERATURES REVIEW

HIV is the acronym of Human Immune-deficiency Virus, a virus that causes Acquired Immune Deficiency Syndrome (AIDS). According to Wilkinson (2001), HIV destroys part of the white blood cells – the body's diseases fighting immune system. The virus stays in the body and slowly destroys the body's defence mechanisms thereby weakening a person's ability to fight off diseases like tuberculosis, pneumonia, malaria and other diseases. Hence, a persons with HIV/AIDS is likely to contract other diseases (Ugwuegbulom, 2001)

Although, the modes of transmission of HIV/AIDS differs throughout the world (Adegoke, 2010), the World Health Organisation (WHO) identifies three main routes of HIV transmissions among general populace. Prominent among them is through all forms of sexual intercourse. The second most common mode of transmission is the exposure to infected blood through transfusion and needles sharing. The third major route of HIV transmission is the prenatal and substantial vertical (mother to child) transmission. For instance, WHO (1992) estimates that 750,000 of 7.25 HIV infections in Africa has been through this route. Other means of HIV transmission include breast-feeding (if the mother has HIV), sharing of sex toys such as dildos or vibrators without disinfecting them etc.

In Nigeria, 71 percent of the reported AIDS cases were through heterosexual sex (Isiugo- Abanihe, 1994). Blood transfusion and infected blood products account for 2.5% while vertical transmission from mother to infant records 1.4%. The transmission mode for the remaining 25% of AIDS cases in the country could not be ascertained (WHO, 1993) although, the likelihood of sexual transmission is high (Isiugo – Abanihe, 1994)

At least for now, AIDS has no cure but it is preventable. The scourge can be prevented by abstaining from sex, delaying sexual intercourse (Onyene et al, 2010), safer sex practices which include knowing the sexual histories of the sexual partners, reducing the number of sexual partners, faithfulness to one uninfected partner, using latex or polyurethane condom throughout sexual encounter and using rubber dam during oral contact with vulva or anus. Other preventive measures include screening of blood for transfusion, use of personal instruments such as clippers, razor blades etc.

Information about these measures has been widely disseminated, yet HIV/AIDS pandemic continues to spread around the world at an alarming rate. For instance, UNAID (2006) estimates that 3.95 million are people living with HIV/AIDS across the globe while 25 million people have died of AIDS since 1981. More than half of the new cases of HIV infections occur among young people (Onyene et al, 2010)

In Nigeria, the student population is composed mainly of those in the age bracket of 20 -30 years. Those in this age bracket are more sexually active and are vulnerable to HIV/AIDS infection. This is why awareness programmes are often developed and intensified on Nigeria campuses. Several methods have been used to sensitise Nigerian students on the existence of HIV/AIDS scourge. These methods as documented by Onyene et al (2010) include, one on one interaction; use of GSM monitor; use of bills; semesterly symposia; administrative nurturance elements; curricula based activities and sex education programmes. Others include individual mentoring and counselling; use of local and wide area network facilities and faith culture based education.

In spite of various campaign about HIV/AIDS there is a conception that the prevalence rate of the scourge is high among the students in tertiary institutions and this has attracted the research interest of scholars (Ibe, 2005; Magnus and Gbakeji, 2009; Onyene et al, 2010). These scholars, one way or the others have questioned the effectiveness or adequacy of various campaigns about HIV/AIDS on Nigerian campuses. This is borne out of the fact that there continue to be high rate of premarital sexual activity, drug and cultism among students

In most of our tertiary institutions are situations whereby everybody is aware of the deadly virus HIV/AIDS but they all seem not to care. Despite high level of awareness of HIV/AIDS as reported by Omoregie (2002), Adedimeji (2003), the risky sexual acts are still common occurrences among students. For example, in a research conducted on fresh students of tertiary institutions in Rivers state, Ibe (2005), observed the risky practices recorded among students to include ever having sex without condom (57.0%), having had multiple sex partners (42.1%) and use of condom at first sexual encounter (22.8%) although 56.1% claimed that first partners were same age. Some had multiple current partners with 3.5% having 4 to 6 current partners Similarly, Magnus and Gbakeji (2009) affirmed that sex is a phenomenon currently ravaging higher institution in Nigeria as a lot of students are engaged in premarital and heterosexual relationships on campus.

In the words of Ambe - Uva (2007) when a society needs to face a problem, it typically turns to its

schools and asks what they are doing about it. In the context of HIV/AIDS, schools are expected not only to teach, but also instil in their students the skills, knowledge, and values that promote safe behaviours in order to protect themselves against HIV infection. While the universities in Nigeria are yet to fulfil the expected results to the society on the issue of HIV/AIDS, the schools, themselves are not HIV free (Ambe - Uva, 2007). More worrisome is the apparent lack of institutionalised response to slow the scourge despite the high prevalence of HIV/AIDS inside the universities population (Kelly, 2003)

#### IV. METHODOLOGY

The study was carried out at the University of Ilorin. In this study, both primary and secondary data were utilised. Secondary data was obtained from relevant document and it provides background information on HIV/AIDS and other related issues. Primary data, on the other hand, constitutes the bulk of inputs used on the empirical analysis of the study. It is obtained through the use of questionnaires. The questionnaires which contained a number of questions on respondents' knowledge of HIV/AIDS and their sexual behaviour were administered on 234 on randomly selected students of the institutions. At the end of the exercise, 220 returned questionnaires were considered well enough for analysis. Data collected were statistically analysed using simple frequency tables and percentages

#### V. RESULTS AND DISCUSSIONS

The results and discussions of the findings are presented in three sub- headings and are discussed below:

##### 1) *Socio – demographic characteristics of Respondents*

The socio – demographic data shows that 112 (50.92%) male and 108 (49.1%) female participated in the study. Four categories of age structure were adopted by the study. These are under 20 years category, between 20 – 25 years category, 26 – 30 years category and above 30 category. According to table 1, 5% of the respondents are less than 20 years, 67.3% are between 20 – 25, 22.3% falls within 26 – 30 years category, while above 30 years category contained 12%. By implication, ages between 20 – 24 are more in the sampled population. This age group is sexually active and more vulnerable population. For instance, Onyene (2010) reported that more than half of all new cases of HIV infections in the world occur among young people under the age of 25. This confirms the earlier findings of AVERT (2007), that HIV/AIDS in Nigeria is highest among young people

between 20- 24. Other result from table 1, shows that respondents were mostly single ((94%), Christians (55.9 %) and are Yoruba (77%)

Table 1: The Socio – Demographic Characteristics of the Respondents

GENDER		
Gender	Frequency	Percentage
Male	112	50.9
Female	108	49.1
Total	220	100
AGE		
Age	Frequency	Percentage
Under 20	11	5.0
20 – 25	25	67.3
26 – 30	49	22.3
Above 30	12	5.4
Total	220	100
MARITAL STATUS		
Marital status	Frequency	Percentage
Married	13	6.0
Single	12	94.0
Total	220	100
RELIGION		
Religion	Frequency	Percentage
Christianity	123	55.9
Islam	92	41.8
Other	5	2.3
Total	220	100
ETHNIC GROUPS		
Ethnic group	Frequency	Percentage
Hausa	3	1.4
Igbo	5	2.3
Yoruba	201	91.3
Others	11	5.0
Total	220	100

Source: Authors' field work, 2010

##### 2) *Sexual behaviour*

Table 2 shows that 72.7% of the sampled students have had sexual intercourse while 27.3% claims they have not. Of those that have had sex, 70% had their first sexual experience between ages 18 to 25, 25.5% between ages 10 – 17 while 5.0% had sexual experience when they are above 25 years (see table 3). This confirms the reports of USAID (2003), AVERT (2007) and Onyene et al (2010) that young people between ages 20 – 25 are more sexually active and are more vulnerable to HIV/AIDS.

Table 2: Sex experience

SEX EXPERIENCE		
Response	Frequency	Percentage
Yes	160	72.7
No	60	27.3
Total	220	100

Source: Authors' field work, 2010

Table 3: Age at first sex experience

AGE AT FIRST SEX EXPERIENCE		
Age group	Frequency	Percentage
10 – 17	40	25
18 - 25	112	70
25 and above	8	5
Total	160	100

Source: Authors' field work, 2010

An assessment of table 4 shows that 62.3% have had more than 1 sexual partners in the last 2 months, with 30.0% having between 2-3 partner., 25.9% have had between 4-6 partners, while 6.4% have had more than 6 partners in the last 2 months. The finding is similar to that of Ibe (2005) which reported multiple sex relationships among students of tertiary institutions in Rivers state, Nigeria.

Table 4: Sexual partners in the last 2 months

SEXUAL PARTNERS IN THE LAST 2 MONTHS		
No of sex partners	Frequency	Percentage
No response	63	28.6
1	20	9.1
2 – 3	66	30.0
4 - 5	57	25.9
6 and above	14	6.4
Total	220	100

Source: Authors' field work, 2010

SEX WITHOUT CONDOM		
response	Frequency	Percentage
No response	60	27.3
Yes	124	56.5
No	36	16.2
Total	220	100

Source: Authors' field work, 2010

Table 5 shows that 56.5% of the sampled students have had sex without condom, 16.2% have not had without condom while 27.3% have not had sex at all and thus have no need to use condom. This validates the work of Akanle (2007), which shows that there is a below average use of condom among youths. In the overall analysis, it is revealed that students engage in risky sexual practices. For instance, majority of them have involved in premarital sex (72.7%). 56.5% have had sex without condom despite having multiple sex partners (62.3%) with 6.3% having more than 6 sexual partners.

### 3) Students' perception of HIV/AIDS

The study shows that a large number of the sampled students are aware of HIV/AIDS and have accurate knowledge of its modes of transmission (see table 6). Respondents identified "sex with infected

person" as a major means of contracting HIV/AIDS. They were also well informed of other modes of transmission such as "needles sharing" (95%), unscreened blood (89.1%). However, many erroneously believe hugging is a means of contracting HIV/AIDS.

Majority of the respondent identified use of condom as a major means of preventing HIV/AIDS (85.7%). Respondents also know that they can be protected by avoiding multiple sexual partners (91.7%) and by abstaining for sex (54.8%). Many believe that going for medical checkup can prevent HIV/AIDS (79.8%) while 46% believe there is nothing we can do to prevent HIV/AIDS but by praying to God (56%)

Table 6: prevention of HIV/AIDS

Methods	Respondents (n =220)			
	Yes	Percentage	No	Percentage
Avoid multiple sex	202	91.8	18	8.2
Abstinence	128	58.2	92	41.8
Use of condom	191	86.8	29	13.2
Going for medical check up	173	78.7	47	21.3
Praying to God	123	55.9	97	44.1
Nothing	38	17.3	182	82.7

Source: Authors' field work, 2010

Table 7: Modes of transmission of HIV/AIDS

Modes	Respondents (n =220)			
	Yes	Percentage	No	Percentage
Sex with infected person	215	97.7	5	2.3
Unscreened blood	196	89.1	24	10.9
Use of razor or sharp objects	189	85.9	31	14.1
needles sharing	209	95	11	5
Hugging	184	83.6	36	16.4
Mosquito bite	50	22.7	170	77.3

Source: Authors' field work, 2010

Table 8 shows that the respondents have adequate knowledge about HIV/AIDS. For instance, 90.5% believe that AIDS can kill. On their knowledge about the cure, majority 81% knew there is no cure yet for AIDS while 97.2 believe it can be prevented. 90.5% of the respondents affirm that HIV/AIDS victim may look healthy.

Table 9 shows the level of students' knowledge of HIV/AIDS. The total awareness scores were



computed so as know the level of knowledge of students on HIV/AIDS. In the computation, the total percentage of the correct responses to the questions on HIV/AIDS was 73.6% while the total percentage of incorrect responses was 26.4%. The high percentage of correct responses indicates that the level of students' knowledge on HIV/AIDS is very high. This corroborate the findings of Ibe (2005), Magnus and Gbakeji (2009) which revealed the high level of awareness of HIV/AIDS among students in Nigerian tertiary institutions. Although, the level of awareness is very high, it not total awareness. For instance, many of the students erroneously believe that going for medical check up can prevent AIDS. Some also believe that HIV/ AIDS can be contracted through hugging or mosquito bite.

Table 8: knowledge of HIV/AIDS

Knowledge	Respondents (n =220)			
	Yes	percentage	No	Percentage
AIDS is real	217	98.6	3	1.4
AIDS kills	199	90.5	21	9.5
AIDS is curable	42	19.1	178	80.9

AIDS is preventable	214	97.3	6	2.7
AIDS victim may look healthy	199	90.6	21	9.4
Youth are HIV/AIDS vulnerable group	152	69.1	68	30.9
AIDS destroys one's future	139	63.2	81	36.0

Source: Authors' field work, 2010

The high level of knowledge of HIV/AIDS among students suggests that the students are aware of the implications of risky sexual habits. However, this does not have impact on their sexual behaviour as a large number still engages in risky sexual behaviour (see table 4 and 5). For instance, an overwhelming majority of the students have accurate information about HIV/AIDS (Table 9). In particular they associated AIDS transmission largely with casual sex, yet they continue to have multiple sexual partners (table 4) without the benefit of condoms (table 5) even though, majority identified condom as an important preventive measure against HIV/AIDS transmission (Table 6)

Table 9: level of students' knowledge of HIV/AIDS

S/N	Item	Correct response (%)	Incorrect response (%)
1	Do you believe HIV/AIDS is real in Nigeria?	98.6	1.4
2	Do you know AIDS kills	90.5	9.5
3	Do you believe that if infected with HIV/AIDS one's future dream could be jeopardised?	63.2	36.8
4	Can someone already infected with AIDS still look healthy?	90.4	9.6
5	Do you know HIV/AIDS is preventable?	97.3	2.7
6	Do you know HIV/AIDS is curable?	80.9	19.1
7	Can people protect themselves from HIV/AIDS with condom every time they have sex?	86.8	13.2
8	Can people protect themselves from HIV/AIDS by abstaining from sex?	58.2	13.2
9	Can a person contract HIV/AIDS from being injected with unsterilised needles	95	5
10	Can a person get HIV from mosquito bite?	77.3	22.7
11	Do you believe prayer is the way to prevent HIV/AIDS	44.1	55.9
12	Can HIV be prevented by going for medical checkup?	21.3	78.7
13	Can people protect themselves from HIV/AIDS by having one faithful partner?	91.8	8.2
14	Can a person get HIV/AIDS from unscreened blood?	89.1	10.9
15	Can a person contract HIV from hugging?	16.4	83.6
16	Do you believe there is nothing to prevent HIV/AIDS?	82.7	17.3
17	Do you believe youths are HIV/AIDS vulnerable group	69.1	30.9
18	Do you believe sex is the major means of contracting HIV/AIDS?	98.2	1.8
Average percentage		73.6	26.4

Source: Authors' field work, 2010

## VI. CONCLUSIONS AND RECOMMENDATIONS

Based on the findings of this study, it could be concluded that HIV/AIDS awareness and knowledge in university of Ilorin, as in other tertiary institutions in Nigeria, is very high. The students are aware of the existence of HIV/AIDS; they have high knowledge of HIV/AIDS and are adequately informed about the facts and fallacies of HIV/AIDS. The high level of awareness, notwithstanding, the risk of contracting the disease is still very high. This is rooted in risky sexual habits of the students. The study has shown that students get involve in multiple sexual relationships without the benefit of condom. The prevalence of campus prostitution does not help the situation as very many female students are involved in widespread prostitution (Uzokwe, 2008).

The increasing risky sexual habits of students in Nigerian tertiary institutions remain the most visible means of contracting HIV/AIDS, therefore, if any meaningful measure should be taken to address this menace, the illicit sexual acts among students must be first be addressed. In this respect, the following recommendations are offered.

The study revealed that students between ages 20 to 30 are most sexually active and the most vulnerable to HIV/AIDS. It is therefore, suggested that sex education and sexuality exposure should be intensified among this group of students.

The study also revealed that premarital sex is a common practice among the students. In view of this, parents, religious leaders, lecturers are advised to devise a means to counsel the students on the need to be morally upright as not to get involve in pre marital sexual relationship.

Nigerian campuses are full of activities that promote sexual promiscuity, it is therefore, suggested that the institutions' managements should encourage productive ventures like sports and other vocational services rather than activities that promote sex such as parties and beauty pageants.

The indecent dressing in our tertiary institutions, especially among female students is a provocative act that stimulates sexual behaviour. Therefore, all institutions are encouraged to adopt moderate dress code for students, particularly the female students.

Still to mention, the awareness of HIV/AIDS among Nigerian students was not total. It is recommended that more enlightenment campaigns should be organised on our campuses. This could be achieved through continually organised symposia, lectures and rallies on HIV/AIDS. In addition, sex

education should be included in the curriculum of Nigerian tertiary institutions.

## REFERENCES RÉFÉRENCES REFERENCIAS

1. Adedimeji, A. (2003): "Perception of HIV/AIDS infection and condom use among undergraduates in Nigerian universities". Department of Sociology, University of Ibadan Nigeria.
2. Adegoke, S.O. (2010) "Effect of HIV/AIDS Awareness on sexual behaviour of students in Tertiary Institutions in Nigeria". Unpublished B.sc dissertation. Department of Sociology, University of Ilorin, Ilorin, Nigeria.
3. Akanle, F.F. (2007) "Condom Use as Preventive Measure against HIV/AIDS Nigeria Unmarried Youths". Ife Journal of Theory and Research in Education, (10.1). Institute of Education, Faculty of Education, Obafemi Awolowo University Ile-Ife, Nigeria
4. Ambe – Uva,T.N. (2007) "Combating HIV/AIDS Epidemic in Nigeria: Responses from National Open University of Nigeria (NOUN). The international Review of Research in Open and Distance learning. Vol.8 (3)
5. Demison, J. A. (2008): "The HIV testing experience of Adolescents in Ndda Zambia: Do families and friends matter? AIDS case, Vol. 20(1)101 105.
6. Federal Republic Nigeria (2000). National Policy on HIV/AIDS/STICS control. Abuja: Federal Ministry of Health.
7. Ibe, S.N. (2005) "HIV/AIDS Awareness study of fresh study in Tertiary Institutions in Rivers state of Nigeria". Journal of Applied Sciences and Environment. Vol 9(1), pp 11 – 13. <http://www.bioline.org.br/ja>.
8. Ibe, SN; Ibe, AU (2003). "Condon use among sexually active students in Bori, Rivers State, Nigeria". African Journal of Applied sciences & Environmental Biology 5: 49-54.
9. Isiugo – Abanihe, U.C.(1994) "Extra – marital relations and Perception of HIV/AIDS in Nigeria. Health Transition Review 4. 1994.Pp 111 - 125
10. Juarez, F. and Martin, T.C. (2006) "Partnership dynamics and sexual health risk among male adolescents in the Fevelas of Recife, Brazil" International Family Planning Perspective, Vol. 32(2), 62-70.
11. Kelly, M. J. (2003). "The Significance of HIV/AIDS for Universities in Africa". JHEA/RESA, 1(1), 1-23.
12. Magnus, O.O., Gbakeji, J.O. (2009) "Analysis of Spatial Awareness of HIV/AIDS amongst students of Tretuary Institutions in Edo State,

- Nigeria. Journal of Ehno- medicine. Vol. 3 (2), pp – 153 – 158.
13. Obinna, C. (2005) 'Story that Touches the Heart: Why Prostitution rate is rising" vanguard (Saturday, December 31, 2005)
  14. Official Home Page of USAID. Retrieved April 14, 2007, from [http://www.Usaid.gov/locations/subsaharan\\_Africa/countries/nigeria](http://www.Usaid.gov/locations/subsaharan_Africa/countries/nigeria)
  15. Official Home Page of AVERT. Retrieved April 14, 2007, from <http://www.Avert.org/aidsnigeria>
  16. Official Home Page of National Intelligence Council (ICA).Retrieved April 14, 2007, from <http://www.Odci.gov/nic>
  17. Okpani, AOU, Okpani, JU (2000). "Sexual activity and contraceptive use among female adolescents- a report from Port-Harcourt, Nigeria". African Journal of Reproductive Health 7 (2): 40-47
  18. Omoregie G.O. (2002): "Sexual behaviour of tertiary institution students using the PSI behavioural change framework". Abuja: Society for Family Health
  19. Onyene,V.,Uzoka N., Ikonta N., Bakare T.V. (2010) "Tertiary Institution learners' HIV/AIDS sensitisation tool(s) receptivity: Implications for sustainable democracy in Nigeria. Journal of AIDS and HIV Research. Vol 2(4).pp 78 – 87. [Http://www.academicjournals.org/jahr](http://www.academicjournals.org/jahr).
  20. Panchaud C, Woog V, Singh S, Darroch JE, Bankole A (2002) "Issues in Measuring HIV Prevalence: The Case of Nigeria". African Journal of Reproductive Health, 6(3): 1
  21. Ugwuegbulam, C.N. (2001) "HIV/AIDS Guidance services (A Gender sensitive Approach")
  22. Owerri: Joe Mankpa Publishers
  23. UNAIDS (2000), "World AIDS campaign with children and young people; Facts and Figures". UNAID Epidemiological fact sheet. Geneva.
  24. Uzokwe, A.O. (2008) "Prostitution in Nigerian University Campuses (part1)" Nigerian World (Monday, July, 21. 2008) <http://www.nigeriaworld.com>
  25. World Health Organization (1993) WHO AIDS Surveillance Report. Epidemiology and Surveillance Unit. Geneva.





This page is intentionally left blank



GLOBAL JOURNAL OF HUMAN SOCIAL SCIENCE  
Volume 11 Issue 1 Version 1.0 February 2011  
Type: Double Blind Peer Reviewed International Research Journal  
Publisher: Global Journals Inc. (USA)  
ISSN: 0975-587X

# Economic Attitudes and Responses to Waste Facilities Location in Residential Areas: The Case of Landfills in Lagos Metropolis, Nigeria

By F.B. Olorunfemi

*Nigerian Institute of Social and Economic Research (NISER)*

**Abstract-** Major landuse issues in solid waste management have been most frequently associated with the stigma of having a major solid waste facility in the neighbourhood. A major drawback for the industry is the difficulty to get acceptance for siting of new waste treatment facilities because of the Not-In-My-Backyard Syndrome. This paper presents the results of a study on the important issues of economic attitudes and perceived risks that influence the acceptance of waste facilities, especially landfills in urban residential areas using Lagos metropolis as a case study. The two landfills (Olushosun and Abule-Egba) were selected because apart from the fact that these two landfills are the most utilized, their contrasting geographical location in medium and high density residential areas respectively and their differences in sizes and operations all combined to justify the choice of the two landfills. The main instrument of data collection is a structured questionnaire administered to heads of households living in close proximity to two landfill sites. The sample size consists of 930 heads of households in the two locations (488 in Olushosun and 442 in Abule-Egba). The households interviewed are those that reside within three-kilometer radius of the two landfill sites. The distance was stratified into three concentric zones round the two sites;  $\leq 1\text{km}$ , 1.1-2km and 2.1-3km. The findings revealed that anticipated economic benefits and perceived risks are key variables in predicting responses to siting waste facilities especially if the facility is hazardous. The major conclusion from this study is that the more risky a facility is perceived to be, the lower the level of support for the siting of such facility.

**Keywords:** Landfills; Risks; Environment; Economic attitudes; Facility; Solid Waste.

**Classification:** GJHSS- C FOR Classification: 070506, 140205, 160703



*Strictly as per the compliance and regulations of:*





# Economic Attitudes and Responses to Waste Facilities Location in Residential Areas: The Case of Landfills in Lagos Metropolis, Nigeria

F.B. Olorunfemi

February 2011

73

Volume XI Issue I Version I

Global Journal of Human Social Science

**Abstract-** Major landuse issues in solid waste management have been most frequently associated with the stigma of having a major solid waste facility in the neighbourhood. A major drawback for the industry is the difficulty to get acceptance for siting of new waste treatment facilities because of the Not-In-My-Backyard Syndrome. This paper presents the results of a study on the important issues of economic attitudes and perceived risks that influence the acceptance of waste facilities, especially landfills in urban residential areas using Lagos metropolis as a case study. The two landfills (Olushosun and Abule-Egba) were selected because apart from the fact that these two landfills are the most utilized, their contrasting geographical location in medium and high density residential areas respectively and their differences in sizes and operations all combined to justify the choice of the two landfills. The main instrument of data collection is a structured questionnaire administered to heads of households living in close proximity to two landfill sites. The sample size consists of 930 heads of households in the two locations (488 in Olushosun and 442 in Abule-Egba). The households interviewed are those that reside within three-kilometer radius of the two landfill sites. The distance was stratified into three concentric zones round the two sites;  $\leq 1\text{km}$ ,  $1.1\text{-}2\text{km}$  and  $2.1\text{-}3\text{km}$ . The findings revealed that anticipated economic benefits and perceived risks are key variables in predicting responses to siting waste facilities especially if the facility is hazardous. The major conclusion from this study is that the more risky a facility is perceived to be, the lower the level of support for the siting of such facility.

**Keywords:** Landfills; Risks; Environment; Economic attitudes; Facility; Solid Waste.

## I. INTRODUCTION

Waste management is an important part of the urban infrastructure as it ensures the protection of the environment and of human health. However, locating environmentally noxious land uses, such as landfills, is becoming increasingly problematic in many parts of the world today as opposition to such facilities seems to rise in both frequency and intensity (Evans 1990; Cutter 1993; Bourke 1994; Zeiss and

Lesfrud 1996; Elliott *et al* 1997). Finding solutions to issues in waste disposal is becoming increasingly difficult. The process of siting a waste disposal facility, even for non-hazardous wastes, creates uncertainty, anxiety, and unrest in the surrounding communities. Local populations are becoming increasingly opposed to facilities which they perceive may threaten their environment and their health (Baxter 1992; Olokesusi 1994; Elliott and Taylor 1996; Adeola, 2000; Martyniak *et al*, 2007).

Thus, major landuse issues in solid waste management have been most frequently associated with the stigma of having a major solid waste facility in the neighbourhood (Couch and Roll-Smith 1994; Olokesusi, 1995). For instance, in developed countries, designation of a projected-site for a new landfill engenders so much community opposition. This is because of the obvious negative externalities such as unsightliness, odour, vermin and insect proliferation, spread of litter, smoke and noise from heavy machinery at site. These may substantially reduce the standard of living of the local community (Hockman *et al* 1976; Wilson 1994). In most instances, the negative externalities outweigh the benefits.

Most experts agree that no perfect siting model exists. According to the United States Environmental Protection Agency (USEPA) (1988), lessons from successful sitings offer insight into which strategies should be pursued and how public officials can resolve particularly difficult issues. One of the most important lessons learned is that appropriate sectors of the public should be consulted at every stage of decision-making process (Cuong, 2003). Public mistrust of technical information is a major siting issue. As a result, some of the common concerns about solid waste facilities which may require some form of mitigation include process issues, health risks, environmental issues, and local impacts. This paper presents the results of a study on the important issues of economic attitudes and perceived risks that influence the acceptance of waste

facilities, especially landfills in residential areas in Lagos metropolis.

## II. CONCEPTUAL FRAMEWORK AND LITERATURE REVIEW

The field of psychology has produced many techniques for measuring attitudes, including both survey and experimental approaches. Some of these have been developed specifically to provide data on the ways in which people typically process information and make decisions under uncertainty (Fischhoff et al 1978; Slovic et al 1993; Fischhoff, 1994). Such psychometric surveys generally have a structure that elicits respondents' perceptions or reveals their thought processes by requiring respondents to rank alternatives or choose among alternative outcomes.

One of the major models that address elements of the psychological and behavioural processes that generate psychosocial and economic impacts as a result of perceived risks of noxious facilities is the psychometric model. Psychometric model is an extension of attitudinal scale development which provides a signal of impact potential by indicating the relative intensity of risk perception and aversion (Tonn and Freeman, 1990).

Psychometric models have been applied to diverse topics, such as consumer decision making, adaptations to natural hazard risks, and aversion to noxious facilities. An early study by Golant and Burton (1969), illustrates the potential scope of this method. They asked respondents to rank selected natural, physical and social hazards by the degree to which avoidance was desired. The relative rankings of hazards by persons who had, and had not, experienced them were then compared and relationships analyzed between these rankings and respondents' socio-economic and personality characteristics. Their study revealed that socio-economic characteristics of people, especially education, and their personality characteristics affect their perception and ranking of hazards.

A limited number of psychometric studies focus on aversion to noxious facilities and perceived risks of technological hazards (Lindell and Earle 1983; Kunreuther et al 1988). In these studies, nuclear plants and nuclear wastes have consistently received the highest rankings in regard to perceived risks. This ranking transcends geographical boundaries; some of these studies were conducted in the United States, while some were conducted in Europe, among others. Some variation in risk evaluations is shown among groups surveyed. However, Lindell and Earle (1983) for instance, found that nuclear engineers as a group are

most willing to live near a nuclear plant, while environmentalists are least willing to do so. Maderthaner, et al (1976) found that those presently living in close proximity to a nuclear plant rated it as less risky than did those living at a greater distance. Regardless of whether these differences are due to variations in familiarity with the technology or to self-selection into the residential distance groups, they indicate the potential of psychometric techniques to identify differences in risk perceptions among population subgroups.

Psychometric analysis depends much on people's knowledge about hazards. Knowledge about hazards plays a central role in perception research (Minnerly, 1992, Phillimore and Moffatt, 1994). Knowledge affects risk perception. Research on knowledge and risk perception falls into two major categories. The first aims at evaluating public grasp of facts about nature and technology for their effect on attitudes toward hazards. The second identified heuristics with which people process information on hazards and the third described lay people's conception of hazards.

According to USEPA (1988) key characteristics of public risk perception which could influence acceptance or rejection of noxious facilities include the following:

Voluntary risks are accepted more readily than those that are imposed: Communities react angrily if they feel coerced into accepting a new solid waste facility. This reaction against the siting process and the agency personnel ultimately leads to a greater perception of risk.

Risks under individual control are accepted more readily than those under government control: In contrast to a risk such as driving without a seat belt, neighbours of potential sites have little control over risks from the site other than the extreme case of selling their homes and moving elsewhere.

Risks that seem fair are more acceptable than those that seem unfair: If the benefits and negative impacts are spread unevenly over the community or county, people will perceive the risks of the facility as being unfair and less acceptable. For example, they are more likely to feel it is fair to be responsible for their own waste disposal, but unfair to accept wastes from another community.

Risk information that comes from trustworthy sources is more believable than information from untrustworthy source: If the public perceives a communicator as untrustworthy then the information will be dismissed as biased, misleading, or otherwise unbelievable. Officials and individuals with vested interests in the outcome of the process will be seen as

less credible, though some of the animosity can be diffused by admitting the biases up front.

Risks that we "dreaded" are less acceptable than those that carry less dread: For example, groundwater contamination will be feared by the community more than risks from driving without seat belts, even when the former poses a lower risk to individuals. Because groundwater contamination is associated with cancer, which is dreaded more than a traffic accident, the perceived risks will be more serious.

Risks that are undetectable create more fear than detectable risks: Risks with effects that take years to detect will be more likely to be feared.

Physical distance from a site influences the acceptability of risk: Recent research found that people living near hazardous waste landfills were willing to pay between \$200 and \$500 per mile for the landfill to be moved away from their neighbourhood.

Rumour, misinformation, dispute and the sheer volume of information all may interact to give an incorrect perception risk: This "social amplification" is made worse by incomplete or inaccurate information, poor timing, and other social and political dynamics in the community.

### III. RESEARCH DESIGN

Both secondary and primary data were utilized for this study. The secondary data included data on landfills from Lagos Waste Management Authority (LAWMA) and valuation data from Lagos State Valuation Office (LSVO). Data collected from LAWMA include information on the locational characteristics of the sites such as the geographic and topographic data while the data collected from LSVO were the number of properties within three kilometers away from the landfill sites.

A structured questionnaire was the main instrument used in the collection of the primary data. Socio economic characteristics are associated with people's perception of impact of facilities (Campbell 1983; McClelland *et al*, 1990). Therefore, in this study, a number of socio economic variables of the respondents were examined. They are; age of household heads, marital status, income, number of persons in the household, education, occupation, length of stay in the area and in the house, type of building occupied by household, and the tenural status of the household (owner occupier or rented), among others. Educational achievement was particularly important as a surrogate for income, or socio economic status (Greenberg and Schneider, 1996).

The sample size consists of 930 heads of households in the two locations (488 in Olushosun and 442 in Abule-Egba). The households interviewed are those that reside within three-kilometer radius of the two

landfill sites. The distance was stratified into three concentric zones round the two sites;  $\leq 1$ km, 1.1-2km and 2.1-3km.

The statistical analysis of data involved basic descriptive univariate statistics (frequency counts, percentages, means, and standard deviation), reliability tests (Alpha). In addition, inferential statistics (chi-square) was used to provide more explanations on the data.

The study area for this research is the Lagos metropolis. However, specific areas where the landfills areas are located are concentrated upon. There are presently three landfills in Lagos namely, the Olushosun, Abule Egba and Solous landfills. However, only Olushosun and Abule Egba landfills were chosen for this study. Apart from the fact that these two landfills are the most utilized, their contrasting geographical location in medium and high density residential areas respectively and their differences in sizes and operations all combined to justify the choice of the two landfills

The choice of the study area is justified on many grounds. For instance, the waste handling patterns and underlying attitudes of the urban population influences the functioning of municipal solid waste management systems, and these factors are, themselves, conditioned by the people's social and cultural context (Schubeller, 1996). The character of waste management tasks and the technical and organizational nature of appropriate solutions depend a great deal on the economic context of the country and/or city in question and, in fact, on the economic situation in the particular area of a city. Without any shade of doubt, solid waste is currently one of the biggest environmental problems commonly experienced in the Lagos metropolis, as in many other Nigerian urban centers (Nnabugwu, 2001). There has been a constant upswing in the annual volume of solid waste generated in various cities and towns in the country. Lagos is however in the lead in the amount of solid waste generated yearly in the country (Saka, 1997). For instance, the volume of wastes generated in Lagos increased from 625,399 metric tonnes in 1982 to 998,081 metric tonnes in year 2000, an increase of about 60% (Nnabugwu, 2001).

### IV. DISCUSSION OF RESULTS

#### 1) Socio-Economic Characteristics of Respondents

Result of the analysis shows that the mean age of the household heads was 45 years and 45 years (approximately) in Olushosun and Abule Egba landfills sites respectively. One fact that emerged from the analysis is that more than 90% of the respondents were aged 30 years and above in the two locations. For

instance, those who are 30 years and below were only 16.7% for Olushosun and 9.6% for Abule-Egba. This implies that almost all the respondents were adults who could speak authoritatively on behalf of their family members. Furthermore, the mean number of persons in the household was 5.62 and 6.40 respectively for the two locations. This indicates that the households in the study area are fairly large due largely to the fact that most of the houses in the study area are rooming apartments. The implication of this for impact studies is that more people are exposed or are at a risk of suffering from negative impact generated by the landfills. In severe cases, if there is outbreak of diseases emanating from the operation of the landfills, more people would be at risk in households that have more persons in them and this situation may aid the rapid spread of such diseases.

The length of stay in an area is important for two reasons in impact study. Firstly, the longer the duration of exposure to the facility by individual, the higher the impact suffered. Secondly, the duration of exposure will influence perception of individuals about the impact experienced from the location and operation of the facility. The mean of this variable (length of stay) were 7.19 and 7.65 years respectively for the two locations. The implication of this is that many of the respondents have lived long enough within the landfill neighbourhoods to experience the impact of the landfills. The mean values of socio-economic variables of the study areas are presented in Table 1.

Table 1: Mean Values of Socio-Economic characteristics of Respondents

Variables	Olushosun		Abule Egba	
	Mea n	SD	Mea n	SD
Age of Respondent (years)	44.9	13.6	45.2	12.9
Length of stay in the Area (years)	7.19	5.77	7.65	6.24
Length of stay in the House (years)	7.18	6.19	6.98	6.19
No of persons in the Household	5.62	3.11	6.40	*3.2

\* Significantly different at .05

Source: Author's Analysis

Furthermore, the result of the analysis reveals that males constitute the highest proportion of the total number of respondents in both locations (78.0% and 83.1% in Olushosun and Abule-Egba respectively). The reason for this is that heads of households were the main targets of the interviewers. Only in few households (22.0% and 17.0% for Olushosun and Abule Egba respectively) were females the head of households.

Those with higher education constitute more than half of the total number of respondents in the two

locations. For instance in Olushosun site, those with secondary education and above constitute 83.3% of the total number of respondents. For Abule-Egba it is 79%. The reason for this is that the level of literacy in urban areas in Nigeria, especially in Lagos, is higher than that of rural areas due to concentration of higher institutions and the in-migration of educated people in search of employment opportunities. This high level of literacy is considered as being good for this type of study considering the fact that knowledge plays a significant role in impact studies. The educational attainment of heads of households is slightly higher in Olushosun than Abule-Egba.

Close to two-thirds of the total number of respondents were tenants in Olushosun. For Abule-Egba it was lower. Results show that 68.9% were tenants in Olushosun while in Abule-Egba, it was 56.8%. The large number of tenants in the two locations has some implications for impact study. First it reduces community cohesion in the sense that local attachment will be low. In situations where we have a facility that generate negative externalities, tenants find it easier to relocate to other locations that are risk free than homeowners. Secondly, the willingness to pay for environmental quality (contingent valuation) in areas that host locally unwanted landuses (LULUs) has been found to be lower among tenants than home owners in previous studies (Sims and Baumann 1983; Nieves *et al*, 1992; Olorunfemi, 2004).

## 2) *Economic Attitudes and Responses to the Location of the Landfills*

Five variables were employed to measure general economic attitudes and responses to location of the landfills. Economic satisfaction is measured by three questions that asked respondents to rate their level of satisfaction with economic opportunities (jobs, income and their personal economic situation) on a 5-point scale. The variable is an average of the three questions, in which 1 represents completely dissatisfied and 5 represents completely satisfied. The reliability co-efficient (alpha) ranges from 0.76 to 0.84. Perceived economic need is an average score of two questions on how important the respondents think it is to improve the local economic situation and economic opportunities. The value of 1 on this scale represents a low need and 5 represents a strong need. For the three zones around the two sites, the reliabilities co-efficient ranges from 0.80 to 0.91.

Anticipated economic benefits is a scale including two that asked respondents local social and economic benefits the area is enjoying as a result of the location of the landfill. The reliability co-efficient for these items ranges from 0.64 to 0.79 across the various



zones. On this scale 1 represents no benefits and 5 represents many benefits. Three questions are combined to create the perceived risk variable. These are natural environmental, health and safety and damage to social life of the community. When scaled, 1 indicates no risk and 5 represent a high level of perceived risk. Together, these questions have a reliability of above 0.65 for all the zones.

Table2: Reliability Co-efficient for General Economic variables

	OLUSHOSUN			ABULE EGBA		
	Zone 1	Zone 2	Zone 3	Zone 1	Zone 2	Zone 3
Economic satisfaction	0.84	0.76	0.81	0.76	0.82	0.76
Perceived economic need	0.91	0.84	0.83	0.80	0.83	0.90
Anticipated economic benefits	0.79	0.68	0.78	0.64	0.68	0.74
Perceived risk	0.69	0.84	0.84	0.73	0.80	0.84

Source: Author's Analysis.

As seen from the table, the reliability co-efficient is very high for all the variables in the different zones. The descriptive statistics of the general economic

The final variable is a hypothetical project support, measured by responses to the question: if the decision were yours, would you allow the siting of a landfill near your area? A five-point scale was employed for this question ranging from "definitely no" (1) to "definitely yes (5). Table 2 shows the reliability co-efficient of all the variables in the different zones.

variables and attitudes to the location of the landfills are presented in Table 3.

Table 3: Descriptive Statistics for the General Economic Variables and Attitudes toward the Location of the Landfills

VARIABLES	OLUSHOSUN			ABULE EGBA		
	Zone 1	Zone 2	Zone 3	Zone 1	Zone 2	Zone 3
Economic Satisfaction	8.67	8.14	8.30	8.17	8.67	8.50
Mean Standard deviation	2.85	2.83	2.83	2.81	3.12	2.82
Perceived Economic need	5.80	4.55	4.55	5.76	5.23	4.77
Mean Standard deviation	2.80	2.65	2.39	2.62	2.72	2.70
Anticipated Economic benefits	7.10	7.36	7.97	7.95	7.71	7.64
Mean Standard deviation	2.49	2.51	2.30	2.30	2.22	2.38
Perceived risk*	7.16	6.21	5.57	6.29	6.80	6.55
Mean Standard deviation	2.76	2.70	3.09	2.86	3.17	3.06
Hypothetical Project support *	2.17	1.93	1.85	1.72	2.17	2.17
Mean Standard deviation	1.20	1.06	0.85	0.95	1.15	1.20
Percent definitely not or probably not support						

\*Means differ to a statistically (0.05) degree.

Source: Author's Analysis.

Perceived risk differs significantly among the three zones around Olushosun landfill site. More importantly, perception of Risk declined from zone 1 to 3 This is not the case in Abule Egba where the perception of risk is higher in zone 2 followed by zone 3. It is lowest in zone 1. The means for this variable do not statistically differ among the three zones.

Economic satisfaction does not differ statistically among the all the zones on the two sites. This is the same result for the perceived economic need and anticipated economic benefits. The means range from 8.14 in zone 2 Olushosun to 8.67 in zones 2 and 1 in both Olushosun and Abule Egba. Perceived economic need however has lower means than economic satisfaction. The means range from 4.55 to 5.80 both in Olushosun. The means shows a gradient of

decline from zones 1 to 3 in both locations. Another variable that shows higher mean is the anticipated economic benefits. The means range from 7.10 in zone 1, Olushosun to 7.97 in zone 3 also in Olushosun. The high mean value for this variable is not surprising considering the fact that the location of the landfill has brought about construction of access roads and extension of piped-borne water to the areas around the sites. Specifically, the Lagos state government has just constructed access roads in and around the two sites. In Olushosun, the access roads now serve as shortcuts for motorists during periods of traffic hold-ups on Ojota expressway. Also, the involvement of private refuse collectors in the use and management of both sites especially the Abule-Egba is perceived to be an economic benefit by the residents. Apart from the refuse contractors, the cart pushers that collect wastes in Oja-



Oba market and nearby residential apartments are perceived to have benefited economically from the location of the Abule-Egba landfill. It would be seen that the mean for this variable is highest in zone 1 in this location and the mean values decline from zones 1 to 3.

Hypothetical project support shows a statistically significant difference among the zones in Olushosun site. The mean for these variables is

however very low for all the zones. The highest mean recorded is 2.17. The reason for this low means is not surprising since most of the respondents would not support the location of a landfill in their neighbourhood. This is because of high perception of risk associated with the facility that was discussed earlier. Support for waste facility siting is shown in Table 4.

Table 4: Support for Waste Facility Siting

	OLUSHOSUN			ABULE EGBA		
	Zone 1	Zone 2	Zone 3	Zone 1	Zone 2	Zone 3
Definitely No	50(10.9)	62(13.6)	50(10.9)	84(20.9)	34(8.5)	40(10.0)
No	65(14.2)	74(16.2)	83(18.2)	55(13.7)	57(14.2)	51(12.7)
Undecided	6(1.3)	-	1(0.2)	9(2.2)	5(1.2)	9(2.2)
Yes	21(4.6)	18(3.9)	12(2.6)	12(3.0)	14(3.5)	14(3.5)
Definitely yes	9(2.0)	5(1.1)	1(0.2)	2(0.5)	7(1.7)	8(2.0)
Total	151(33.0)	159(34.8)	147(32.2)	162(40.4)	117(29.2)	122(30.4)
	$\chi^2 = 21.41, P < .05$			$\chi^2 = 23.27, P < .05$		

Source: Author's Analysis.

From Table 4 it is clear that more than two-third of the respondents in all the zones would not support the siting of landfill within their area. For instance, while the proportion of the respondents that would not support the siting of landfill in their neighbourhood, is 84.0% in Olushosun, it is 80.0% in Abule-Egba. This result is very important within the context of this study since the issue of acceptance to landfill siting is one of the focus of the study. Only very few respondents were undecided about whether they would support such proposal. The proportion of respondents in this category is highest in zone 1 for both sites (1.3 and 2.2 in Olushosun and

Abule Egba respectively). A further analysis using chi-square shows that there is a significant difference in project support among the different zones in the two locations ( $\chi^2 = 21.41$  and  $23.37$  respectively for Olushosun and Abule-Egba).

### 3) Relationship between Economic Attitude and Support for Siting of Landfill

Correlation analysis was used to show the relationships between the general economic variables. The result of this is shown in Table 4.

Table 5: Correlation between Economic Variables and Support for Landfill Siting.

OLUSHOSUN					
Zone 1	1	2	3	4	5
Economic satisfaction	-	.38**	-.20*	.30**	.10
Perceived economic need		-	-.17*	.14	.28**
Anticipated economic benefit			-	-.39**	-.13
Perceived risk				-	-.19*
Hypothetical project support					-
Zone 2	1	2	3	4	5
Economic satisfaction	-	.43**	-.32**	.09	-.14
Perceived economic need		-	-.27**	.11	-.08
Anticipated economic benefit			-	-.29**	.10
Perceived risk				-	-.04
Hypothetical project support					-
Zone 3	1	2	3	4	5
Economic satisfaction	-	.09	-.42**	.23**	-.05
Perceived economic need		-	-.21**	-.01	.06
Anticipated economic benefit			-	-.36**	-.02
Perceived risk				-	-.07
Hypothetical project support					-
ABULE EGBA					
Zone 1	1	2	3	4	5

Economic satisfaction	-	.15	-.19*	.23**	-.02
Perceived economic need	-	-	-.23**	.01	.22**
Anticipated economic benefit	-	-	-	-.28**	-.06
Perceived risk	-	-	-	-	.12
Hypothetical project support	-	-	-	-	-
Zone 2	1	2	3	4	5
Economic satisfaction	-	.22*	-.26**	.16	-.19*
Perceived economic need	-	-	-.29**	.17	.01
Anticipated economic benefit	-	-	-	-.36**	-.23*
Perceived risk	-	-	-	-	.16
Hypothetical project support	-	-	-	-	-
Zone 3	1	2	3	4	5
Economic satisfaction	-	.37**	-.33**	.34	.05
Perceived economic need	-	-	-.07	.11	-.16
Anticipated economic benefit	-	-	-	-.25**	.14
Perceived risk	-	-	-	-	-.05
Hypothetical project support	-	-	-	-	-

\* Correlation is significant at the 0.05 level

\*\* Correlation is significant at the 0.01 level

Source: Author's Analysis.

As seen from Table 5, correlations among these variables indicate that the relationship between the general economic attitudes is not as strong as expected. The highest correlation value obtained in all the zones in the two locations was 0.43. This was the correlation between economic satisfaction and perceived economic need in Olushosun. Economic satisfaction and anticipated economic benefits are negatively correlated in all the three zones in Olushosun. This implies that the benefits residents enjoy from the location of the landfill do not yet measure up to the economic satisfaction expected to be enjoyed from the facility. The same is also true among all the zones in Abule Egba.

Perceived risk is seen from the table to be negatively correlated with hypothetical project support. Except in zones 1 and 2 in Abule-Egba, all other zones in the two sites have negative correlation between the two variables. The inference to be drawn from this is that the more risky a facility is perceived to be, the lower the level of support for the siting for such facility. As seen earlier, the support for the location of the two landfills is low. The correlation values for perceived risk and project support are higher in zones closer to the sites (zones 1 for both sites). This implies that residents closer to the landfill sites perceived more risk from the landfill and are therefore more likely to reject proposal for sitting such a facility in the future.

## V. CONCLUSION

Results showed that perception of risks is related to responses to siting waste facilities. Furthermore, anticipated economic benefits are also clearly related to responses to siting waste facilities in the study area. The finding is consistent with studies

suggesting that anticipated economic benefits and perceived risks are key variables in predicting responses to siting waste facilities especially if the facility is hazardous. The major inference to be drawn from this study is that the more risky a facility is perceived to be, the lower the level of support for the siting for such facility.

A major implication of the results from this study is that future siting of waste facilities could become very problematic since those whose communities are expected to host the facilities are becoming increasingly familiar with the negative externalities of such facilities. Given this scenario, solid waste managers may be forced to site landfills in distant rural locations from the urban centers. Consequently additional disposal cost will have to be borne by haulage firms which will in turn pass the cost to consumers.

## VI. ACKNOWLEDGEMENT

I wish to thank Prof. A.S Gbadegesin of the Department of Geography, University of Ibadan, Ibadan, Nigeria for supervising the thesis which provided the foundation for this work. Dr. Susan Elliott of McMaster University Institute of Environment and Health, Canada provided some of the materials for literature. I also thank the Council for the Development of Social Science Research in Africa (CODESRIA), Dakar, Senegal for financial support. The original version of this paper was presented at the International Conference "Waste the Social Context 08". Organised by the Edmonton Waste Management Centre of Excellence (EWMCE). Held at the Shaw Conference Center, Edmonton, Alberta Canada, 11th – 15th May, 2008. I thank the Canadian International Development Agency (CIDA) for the travel grant to attend the conference.

## REFERENCES RÉFÉRENCES REFERENCIAS

1. Adeola F.O (2000) "Endangered Community, Enduring People: Toxic Contamination, Health and Adaptive Responses in a Local Context" *Environment and Behaviour*, Vol. 32 No. 2 pp 209-249.
2. Bailey, C., Charles E. F., S, Holland, and A, Warven (1989) *Public Opinions and Attitudes Regarding Hazardous Wastes in Alabama: Results from Three 1988 Surveys*. Alabama Agricultural Experiment Station, Rural Sociological Series No. 14 Auburn University: Auburn, Alabama.
3. Baxter J. (1992). "The Psychosocial Impacts of Exposure to a Recently Approved Waste Residents Site: The Experience of Living near the Milton Landfill". *M.A. Thesis*, Hamilton, Ontario. Department of Geography, McMaster University.
4. Bord, R.J and O'Connor, R.E. (1992). "Determinants of Risk Perceptions of a Hazardous Waste Site". *Risk Analysis*, Vol 12 No 3 pp. 411 – 416.
5. Bourke Lisa (1994)"Economic Attitudes and Responses to Siting Hazardous Waste Facilities in Rural Utah". *Rural Sociology* Vol 59 No 3 pp 485-496.
6. Campbell, J. M., (1983). "Ambient Stressors". *Environment and Behaviour*. Vol. 15, pp. 355-380.
7. Couch, Stephen R and Steve Roll-Smith (1994) "Environmental Controversies, Interfacional Resources, and Rural Communities Siting Versus Exposure Disputes". *Rural Sociology*. Vol. 59 No 25 pp. 25-44
8. Cuong, L.D. (2003) "Institutional Issues for Landfill Siting in Viet Nam: Practical Recommendations for Improvement". A Thesis Submitted in Conformity with the requirements for the degree of Master of Engineering Graduate Department of Civil Engineering, University of Toronto, Canada.
9. Cutter, S., (1993) *Living With Risk*. Edward Arnold, London, WK.
10. Elliott S.J. and Taylor. S.M. (1996). Worrying About Waste: Diagnosis and Prescription. In Munton, D. (ed.) *Siting by Choice: Waste Facilities, NIMBY and Volunteer Communities*. Washington. DC. Georgetown University Press. Pp 290-318
11. Elliott, S.J., Taylor, S.M., Hampson, C., J. Dunn., J. Eyles, S. Walter, and D. Streiner (1997). "It's Not Because You Like It Any Better...: Residents Perceptions of a Landfill Site". *Journal of Environmental Psychology*. Vol 17, pp. 229 – 241.
12. Evans G.W. (Ed) (1990) *Environmental Stress*. University of Cambridge Press, Cambridge.
13. Fischhoff, B. (1994) "Acceptable Risk: A Conceptual Proposal". *Risk Analysis*, Vol. 14 No 2 pp14-21.
14. Fischhoff, B. Slovic P., Lichtenstein, S., Read and Combs, B. (1978). "How Safe is Safe Enough? A Psychometric Study of Attitudes Towards Technological Risks and Benefits". *Policy Sciences* Vol. 9, pp 127 – 152.
15. Golant and Burton H. (1969). *Avoidance-Response to the Risk Environment*. Natural Hazards Research. University of Toronto. Working Paper No. 6.
16. Greenberg, M., Schneider, D. (1996). *Environmentally Devastated Neighbourhoods*. Rutgers University Press, New, Brunswick NJ.
17. Hockman, E.,E. Hwang, and G. Rudzitis (1976), *The Environmental Costs of Landfills and Incinerators*, Chicago: University of Chicago and Argonne National Laboratory.
18. Kunreuther, H, Desvougues W.H and Slovic P. (1988). "Nevada's Predicament". *Environmentalist*. Vol. 30. pp. 17 – 30.
19. Lindell and Earle (1983). "How close is close Enough?: Public Perceptions of the Risks of Industrial Facilities". *Risk Analysis* Vol. 3 pp. 245.
20. Martynaiak N.D; Hallman, W.K and Wandersman, A.H (2007) "The Case of the Pinewood Landfill: The Politics of Risk, Nationality, and the Disposal of Hazardous Wastes". *Research in Social Problems and Public Policy*. Vol. 14, pp. 73-91
21. McClelland G., Schulze W and Hurd B. (1990). The Effect of Risk Beliefs on Property Values: A Case Study of Hazardous Waste Site. *Risk Analysis* 10 Vol 4 pp. 485 – 97.
22. Minnerly W.L. (1992). "The Appraisal Institute's Role in Environmental Hazards Research and Education". *Journal of Real Estate Research* Vol. 7 No. 3 pp 215-223.
23. Nnabugwu O.V. (2001). "GIS-Based Micro-Simulation System for Evaluating and Mapping Domestic Solid Waste Generation" *Paper Presented at the 44<sup>th</sup> Annual NGA Conference*. University of Ibadan. Ibadan
24. Olokesusi, F. (1994) "Impact of the Ring Road Solid Waste Disposal Facility in Ibadan, Nigeria". NISER Monograph Series No 3. NISER, Ibadan.

25. Olokesusi, F. (1995) "Hazardous Waste Facility Siting and Differing Perceptions of Risk in Rural Nigeria". NISER Monograph, Ibadan
26. Phillimore, P., Moffatt, S.,(1994) "Discounted Knowledge: Local Experience, Environmental Pollution, and Health". In: Popay, J., Williams, G. (Eds.) *Researching the People's Health*. Routledge, London, pp. 134-153.
27. Saka, G.O (1997) *Strategies for Solid Waste Management*. Paper presented at the Workshop on Environmental Pollution and Management, Ikeja Lagos.
28. Schubeller, P (1996) "Conceptual Framework for Municipal Solid Waste Management in Low Income Countries". *Urban Management Programme. Working Papers Series 9*.
29. Slovic, P. Flynn, J. and Gregory, R. (1994) "Stigma Happens: Social Problems in the Siting of Nuclear Waste Facilities", *Risk Analysis*, Vol. 14 No 3, pp. 140-148
30. Slovic, P. M Layman and James H. Flynn (1993) "Perceived Risk, Trust and Nuclear Waste: Lessons from Yucca Mountain". In: Riley Dunlap: Michael kraft and Eugene Rosa (eds) *Public reactions to Nuclear Waste: Citizens view of Repository Siting*. Duke University Press: Durham
31. Tonn B.E. and Freeman, K (1990) Knowledge-Based Representations of Risk Beliefs. *Risk Analysis* Vol 10, pp. 169 – 184.
32. USEPA (1988): *The Solid Waste Dilemma: An Agenda for Action*. Draft Report of the Municipal Solid Waste Tasks Force. Office of Solid Waste Washington, DC.
33. Wilson, A.R.,(1994). "The Environmental Opinion: Basis for an Impaired Value Opinion," *Appraisal Journal*, Vol. 62, No. 3, p 410.
34. Zeiss, C, and Lesfrud, L. (1996) "Making or Breaking Waste Facility Siting Successes with a Siting Framework". *Environmental Management*, vol. 20, No. 1, pp. 53-64.



# GLOBAL JOURNALS INC. (US) GUIDELINES HANDBOOK 2011

---

*[www.GlobalJournals.org](http://www.GlobalJournals.org)*



## FELLOWS

### FELLOW OF INTERNATIONAL CONGRESS OF HUMAN SOCIAL SCIENCE (FICHSS)

- 'FICHSS' title will be awarded to the person/institution after approval of Editor-in-Chief and Editorial Board. The title 'FICHSS' can be added to name in the following manner:  
e.g. **Dr. Andrew Knoll, Ph.D., FICHSS**
- FICHSS can submit two papers every year for publication without any charges. The paper will be sent to two peer reviewers. The paper will be published after the acceptance of peer reviewers and Editorial Board.
- **Free unlimited Web-space** will be allotted to 'FICHSS' along with subDomain to contribute and partake in our activities.
- A **professional email address** will be allotted free with unlimited email space.
- FICHSS will be authorized to receive e-Journals -GJHSS for the Lifetime.
- FICHSS will be exempted from the registration fees of Seminar/Symposium/Conference/Workshop conducted internationally of GJHSS (FREE of Charge).
- FICHSS will be Honorable Guest of any gathering held.

### ASSOCIATE OF INTERNATIONAL CONGRESS OF HUMAN SOCIAL SCIENCE (AICHSS)

- AICHSS title will be awarded to the person/institution after approval of Editor-in-Chief and Editorial Board. The title 'AICHSS' can be added to name in the following manner:  
eg. Dr. Thomas Knoll, Ph.D., AICHSS
- AICHSS can submit one paper every year for publication without any charges. The paper will be sent to two peer reviewers. The paper will be published after the acceptance of peer reviewers and Editorial Board.
- Free 2GB Web-space will be allotted to 'FICHSS' along with sub Domain to contribute and participate in our activities.
- A professional email address will be allotted with free 1GB email space.
- AICHSS will be authorized to receive e-Journal GJHSS for lifetime.

## AUXILIARY MEMBERSHIPS

---

### ANNUAL MEMBER

- Annual Member will be authorized to receive e-Journal GJHSS for one year (Journal Subscription for one year).
- The member will be allotted free 1 GB Web-space along with subDomain to contribute and participate in our activities.
- A professional email address will be allotted free 500 MB email space.

### PAPER PUBLICATION

- The members can publish paper once. The paper will be sent to two-peer reviewer. The paper will be published after the acceptance of peer reviewers and Editorial Board.



## PROCESS OF SUBMISSION OF RESEARCH PAPER

---

The Area or field of specialization may or may not be of any category as mentioned in 'Scope of Journal' menu of the GlobalJournals.org website. There are 37 Research Journal categorized with Six parental Journals GJCST, GJMR, GJRE, GJMBR, GJSFR, GJHSS. For Authors should prefer the mentioned categories. There are three widely used systems UDC, DDC and LCC. The details are available as 'Knowledge Abstract' at Home page. The major advantage of this coding is that, the research work will be exposed to and shared with all over the world as we are being abstracted and indexed worldwide.

The paper should be in proper format. The format can be downloaded from first page of 'Author Guideline' Menu. The Author is expected to follow the general rules as mentioned in this menu. The paper should be written in MS-Word Format (\*.DOC,\*.DOCX).

The Author can submit the paper either online or offline. The authors should prefer online submission.

Online Submission: There are three ways to submit your paper:

**(A) (I) Register yourself using top right corner of Home page then Login from same place twice. If you are already registered, then login using your username and password.**

**(II) Choose corresponding Journal from "Research Journals" Menu.**

**(III) Click 'Submit Manuscript'. Fill required information and Upload the paper.**

**(B) If you are using Internet Explorer (Although Mozilla Firefox is preferred), then Direct Submission through Homepage is also available.**

**(C) If these two are not convenient, and then email the paper directly to dean@globaljournals.org as an attachment.**

Offline Submission: Author can send the typed form of paper by Post. However, online submission should be preferred.

# PREFERRED AUTHOR GUIDELINES

## MANUSCRIPT STYLE INSTRUCTION (Must be strictly followed)

Page Size: 8.27" X 11"

- Left Margin: 0.65
- Right Margin: 0.65
- Top Margin: 0.75
- Bottom Margin: 0.75
- Font type of all text should be Times New Roman.
- Paper Title should be of Font Size 24 with one Column section.
- Author Name in Font Size of 11 with one column as of Title.
- Abstract Font size of 9 Bold, "Abstract" word in Italic Bold.
- Main Text: Font size 10 with justified two columns section
- Two Column with Equal Column with of 3.38 and Gaping of .2
- First Character must be two lines Drop capped.
- Paragraph before Spacing of 1 pt and After of 0 pt.
- Line Spacing of 1 pt
- Large Images must be in One Column
- Numbering of First Main Headings (Heading 1) must be in Roman Letters, Capital Letter, and Font Size of 10.
- Numbering of Second Main Headings (Heading 2) must be in Alphabets, Italic, and Font Size of 10.

**You can use your own standard format also.**

### Author Guidelines:

1. General,
2. Ethical Guidelines,
3. Submission of Manuscripts,
4. Manuscript's Category,
5. Structure and Format of Manuscript,
6. After Acceptance.

### 1. GENERAL

Before submitting your research paper, one is advised to go through the details as mentioned in following heads. It will be beneficial, while peer reviewer justify your paper for publication.

### Scope

The Global Journals Inc. (US) welcome the submission of original paper, review paper, survey article relevant to the all the streams of Philosophy and knowledge. The Global Journals Inc. (US) is parental platform for Global Journal of Computer Science and Technology, Researches in Engineering, Medical Research, Science Frontier Research, Human Social Science, Management, and Business organization. The choice of specific field can be done otherwise as following in Abstracting and Indexing Page on this Website. As the all Global Journals Inc. (US) are being abstracted and indexed (in process) by most of the reputed organizations. Topics of only narrow interest will not be accepted unless they have wider potential or consequences.



## 2. ETHICAL GUIDELINES

Authors should follow the ethical guidelines as mentioned below for publication of research paper and research activities.

Papers are accepted on strict understanding that the material in whole or in part has not been, nor is being, considered for publication elsewhere. If the paper once accepted by Global Journals Inc. (US) and Editorial Board, will become the *copyright of the Global Journals Inc. (US)*.

**Authorship: The authors and coauthors should have active contribution to conception design, analysis and interpretation of findings. They should critically review the contents and drafting of the paper. All should approve the final version of the paper before submission**

The Global Journals Inc. (US) follows the definition of authorship set up by the Global Academy of Research and Development. According to the Global Academy of R&D authorship, criteria must be based on:

- 1) Substantial contributions to conception and acquisition of data, analysis and interpretation of the findings.
- 2) Drafting the paper and revising it critically regarding important academic content.
- 3) Final approval of the version of the paper to be published.

All authors should have been credited according to their appropriate contribution in research activity and preparing paper. Contributors who do not match the criteria as authors may be mentioned under Acknowledgement.

Acknowledgements: Contributors to the research other than authors credited should be mentioned under acknowledgement. The specifications of the source of funding for the research if appropriate can be included. Suppliers of resources may be mentioned along with address.

**Appeal of Decision: The Editorial Board's decision on publication of the paper is final and cannot be appealed elsewhere.**

**Permissions: It is the author's responsibility to have prior permission if all or parts of earlier published illustrations are used in this paper.**

Please mention proper reference and appropriate acknowledgements wherever expected.

If all or parts of previously published illustrations are used, permission must be taken from the copyright holder concerned. It is the author's responsibility to take these in writing.

Approval for reproduction/modification of any information (including figures and tables) published elsewhere must be obtained by the authors/copyright holders before submission of the manuscript. Contributors (Authors) are responsible for any copyright fee involved.

## 3. SUBMISSION OF MANUSCRIPTS

Manuscripts should be uploaded via this online submission page. The online submission is most efficient method for submission of papers, as it enables rapid distribution of manuscripts and consequently speeds up the review procedure. It also enables authors to know the status of their own manuscripts by emailing us. Complete instructions for submitting a paper is available below.

Manuscript submission is a systematic procedure and little preparation is required beyond having all parts of your manuscript in a given format and a computer with an Internet connection and a Web browser. Full help and instructions are provided on-screen. As an author, you will be prompted for login and manuscript details as Field of Paper and then to upload your manuscript file(s) according to the instructions.

To avoid postal delays, all transaction is preferred by e-mail. A finished manuscript submission is confirmed by e-mail immediately and your paper enters the editorial process with no postal delays. When a conclusion is made about the publication of your paper by our Editorial Board, revisions can be submitted online with the same procedure, with an occasion to view and respond to all comments.

Complete support for both authors and co-author is provided.

## 4. MANUSCRIPT'S CATEGORY

Based on potential and nature, the manuscript can be categorized under the following heads: Original research paper: Such papers are reports of high-level significant original research work.

Review papers: These are concise, significant but helpful and decisive topics for young researchers.

Research articles: These are handled with small investigation and applications

Research letters: The letters are small and concise comments on previously published matters.

## 5. STRUCTURE AND FORMAT OF MANUSCRIPT

The recommended size of original research paper is less than seven thousand words, review papers fewer than seven thousands words also. Preparation of research paper or how to write research paper, are major hurdle, while writing manuscript. The research articles and





research letters should be fewer than three thousand words, the structure original research paper; sometime review paper should be as follows:

**Papers:** These are reports of significant research (typically less than 7000 words equivalent, including tables, figures, references), and comprise:

- (a) *Title* should be relevant and commensurate with the theme of the paper.
- (b) A brief Summary, "*Abstract*" (less than 150 words) containing the major results and conclusions.
- (c) Up to *ten keywords*, that precisely identifies the paper's subject, purpose, and focus.
- (d) An *Introduction*, giving necessary background excluding subheadings; objectives must be clearly declared.
- (e) Resources and techniques with sufficient complete experimental details (wherever possible by reference) to permit repetition; sources of information must be given and numerical methods must be specified by reference, unless non-standard.
- (f) Results should be presented concisely, by well-designed tables and/or figures; the same data may not be used in both; suitable statistical data should be given. All data must be obtained with attention to numerical detail in the planning stage. As reproduced design has been recognized to be important to experiments for a considerable time, the Editor has decided that any paper that appears not to have adequate numerical treatments of the data will be returned un-refereed;
- (g) Discussion should cover the implications and consequences, not just recapitulating the results; *conclusions* should be summarizing.
- (h) Brief Acknowledgements.
- (i) References in the proper form.

Authors should very cautiously consider the preparation of papers to ensure that they communicate efficiently. Papers are much more likely to be accepted, if they are cautiously designed and laid out, contain few or no errors, are summarizing, and be conventional to the approach and instructions. They will in addition, be published with much less delays than those that require much technical and editorial correction.

The Editorial Board reserves the right to make literary corrections and to make suggestions to improve brevity.

It is vital, that authors take care in submitting a manuscript that is written in simple language and adheres to published guidelines.

## Format

*Language: The language of publication is UK English. Authors, for whom English is a second language, must have their manuscript efficiently edited by an English-speaking person before submission to make sure that, the English is of high excellence. It is preferable, that manuscripts should be professionally edited.*

**Standard Usage, Abbreviations, and Units:** Spelling and hyphenation should be conventional to The Concise Oxford English Dictionary. Statistics and measurements should at all times be given in figures, e.g. 16 min, except for when the number begins a sentence. When the number does not refer to a unit of measurement it should be spelt in full unless, it is 160 or greater.

Abbreviations supposed to be used carefully. The abbreviated name or expression is supposed to be cited in full at first usage, followed by the conventional abbreviation in parentheses.

Metric SI units are supposed to generally be used excluding where they conflict with current practice or are confusing. For illustration, 1.4 l rather than  $1.4 \times 10^{-3} \text{ m}^3$ , or 4 mm somewhat than  $4 \times 10^{-3} \text{ m}$ . Chemical formula and solutions must identify the form used, e.g. anhydrous or hydrated, and the concentration must be in clearly defined units. Common species names should be followed by underlines at the first mention. For following use the generic name should be constricted to a single letter, if it is clear.

## Structure

All manuscripts submitted to Global Journals Inc. (US), ought to include:

**Title:** The title page must carry an instructive title that reflects the content, a running title (less than 45 characters together with spaces), names of the authors and co-authors, and the place(s) wherever the work was carried out. The full postal address in addition with the e-mail address of related author must be given. Up to eleven keywords or very brief phrases have to be given to help data retrieval, mining and indexing.



Abstract, used in Original Papers and Reviews:

### Optimizing Abstract for Search Engines

Many researchers searching for information online will use search engines such as Google, Yahoo or similar. By optimizing your paper for search engines, you will amplify the chance of someone finding it. This in turn will make it more likely to be viewed and/or cited in a further work. Global Journals Inc. (US) have compiled these guidelines to facilitate you to maximize the web-friendliness of the most public part of your paper.

### Keywords

A major linchpin in research work for the writing research paper is the keyword search, which one will employ to find both library and Internet resources.

One must be persistent and creative in using keywords. An effective keyword search requires a strategy and planning a list of possible keywords and phrases to try.

Search engines for most searches, use Boolean searching, which is somewhat different from Internet searches. The Boolean search uses "operators," words (and, or, not, and near) that enable you to expand or narrow your affords. Tips for research paper while preparing research paper are very helpful guideline of research paper.

Choice of key words is first tool of tips to write research paper. Research paper writing is an art. A few tips for deciding as strategically as possible about keyword search:

- One should start brainstorming lists of possible keywords before even begin searching. Think about the most important concepts related to research work. Ask, "What words would a source have to include to be truly valuable in research paper?" Then consider synonyms for the important words.
- It may take the discovery of only one relevant paper to let steer in the right keyword direction because in most databases, the keywords under which a research paper is abstracted are listed with the paper.
- One should avoid outdated words.

Keywords are the key that opens a door to research work sources. Keyword searching is an art in which researcher's skills are bound to improve with experience and time.

*Numerical Methods:* Numerical methods used should be clear and, where appropriate, supported by references.

*Acknowledgements:* Please make these as concise as possible.

### References

References follow the *Harvard scheme* of referencing. References in the text should cite the authors' names followed by the time of their publication, unless there are three or more authors when simply the first author's name is quoted followed by et al. unpublished work has to only be cited where necessary, and only in the text. Copies of references in press in other journals have to be supplied with submitted typescripts. It is necessary that all citations and references be carefully checked before submission, as mistakes or omissions will cause delays.

References to information on the World Wide Web can be given, but only if the information is available without charge to readers on an official site. Wikipedia and Similar websites are not allowed where anyone can change the information. Authors will be asked to make available electronic copies of the cited information for inclusion on the Global Journals Inc. (US) homepage at the judgment of the Editorial Board.

The Editorial Board and Global Journals Inc. (US) recommend that, citation of online-published papers and other material should be done via a DOI (digital object identifier). If an author cites anything, which does not have a DOI, they run the risk of the cited material not being noticeable.



The Editorial Board and Global Journals Inc. (US) recommend the use of a tool such as Reference Manager for reference management and formatting.

#### *Tables, Figures and Figure Legends*

*Tables: Tables should be few in number, cautiously designed, uncrowned, and include only essential data. Each must have an Arabic number, e.g. Table 4, a self-explanatory caption and be on a separate sheet. Vertical lines should not be used.*

*Figures: Figures are supposed to be submitted as separate files. Always take in a citation in the text for each figure using Arabic numbers, e.g. Fig. 4. Artwork must be submitted online in electronic form by e-mailing them.*

#### *Preparation of Electronic Figures for Publication*

Even though low quality images are sufficient for review purposes, print publication requires high quality images to prevent the final product being blurred or fuzzy. Submit (or e-mail) EPS (line art) or TIFF (halftone/photographs) files only. MS PowerPoint and Word Graphics are unsuitable for printed pictures. Do not use pixel-oriented software. Scans (TIFF only) should have a resolution of at least 350 dpi (halftone) or 700 to 1100 dpi (line drawings) in relation to the imitation size. Please give the data for figures in black and white or submit a Color Work Agreement Form. EPS files must be saved with fonts embedded (and with a TIFF preview, if possible).

For scanned images, the scanning resolution (at final image size) ought to be as follows to ensure good reproduction: line art: >650 dpi; halftones (including gel photographs) : >350 dpi; figures containing both halftone and line images: >650 dpi.

**Color Charges:** It is the rule of the Global Journals Inc. (US) for authors to pay the full cost for the reproduction of their color artwork. Hence, please note that, if there is color artwork in your manuscript when it is accepted for publication, we would require you to complete and return a color work agreement form before your paper can be published.

*Figure Legends: Self-explanatory legends of all figures should be incorporated separately under the heading 'Legends to Figures'. In the full-text online edition of the journal, figure legends may possibly be truncated in abbreviated links to the full screen version. Therefore, the first 100 characters of any legend should notify the reader, about the key aspects of the figure.*

## **6. AFTER ACCEPTANCE**

Upon approval of a paper for publication, the manuscript will be forwarded to the dean, who is responsible for the publication of the Global Journals Inc. (US).

### **6.1 Proof Corrections**

The corresponding author will receive an e-mail alert containing a link to a website or will be attached. A working e-mail address must therefore be provided for the related author.

Acrobat Reader will be required in order to read this file. This software can be downloaded

(Free of charge) from the following website:

[www.adobe.com/products/acrobat/readstep2.html](http://www.adobe.com/products/acrobat/readstep2.html). This will facilitate the file to be opened, read on screen, and printed out in order for any corrections to be added. Further instructions will be sent with the proof.

Proofs must be returned to the dean at [dean@globaljournals.org](mailto:dean@globaljournals.org) within three days of receipt.

As changes to proofs are costly, we inquire that you only correct typesetting errors. All illustrations are retained by the publisher. Please note that the authors are responsible for all statements made in their work, including changes made by the copy editor.

### **6.2 Early View of Global Journals Inc. (US) (Publication Prior to Print)**

The Global Journals Inc. (US) are enclosed by our publishing's Early View service. Early View articles are complete full-text articles sent in advance of their publication. Early View articles are absolute and final. They have been completely reviewed, revised and edited for publication, and the authors' final corrections have been incorporated. Because they are in final form, no changes can be made after sending them. The nature of Early View articles means that they do not yet have volume, issue or page numbers, so Early View articles cannot be cited in the conventional way.

### **6.3 Author Services**

Online production tracking is available for your article through Author Services. Author Services enables authors to track their article - once it has been accepted - through the production process to publication online and in print. Authors can check the status of their



© Copyright by Global Journals Inc.(US) | Guidelines Handbook

articles online and choose to receive automated e-mails at key stages of production. The authors will receive an e-mail with a unique link that enables them to register and have their article automatically added to the system. Please ensure that a complete e-mail address is provided when submitting the manuscript.

#### 6.4 Author Material Archive Policy

Please note that if not specifically requested, publisher will dispose off hardcopy & electronic information submitted, after the two months of publication. If you require the return of any information submitted, please inform the Editorial Board or dean as soon as possible.

#### 6.5 Offprint and Extra Copies

A PDF offprint of the online-published article will be provided free of charge to the related author, and may be distributed according to the Publisher's terms and conditions. Additional paper offprint may be ordered by emailing us at: [editor@globaljournals.org](mailto:editor@globaljournals.org).

## Informal Tips for writing a Social Science Research Paper to increase readability and citation

Before start writing a good quality Social Science Research Paper, let us first understand what is Social Science Research Paper? So Social Science Research Paper is the paper which is written by professionals or scientists who are associated to Human Social Science or doing research study in this area. If you are novel to this field then you can consult about this field from your supervisor or guide.

#### Techniques for writing a good quality Social Science Research Paper:

**1. Choosing the topic-** In most cases, the topic is searched by the interest of author but it can be also suggested by the guides. You can have several topics and then you can judge that in which topic or subject you are finding yourself most comfortable. This can be done by asking several questions to yourself, like Will I be able to carry our search in this area? Will I find all necessary recourses to accomplish the search? Will I be able to find all information in this field area? If the answer of these types of questions will be "Yes" then you can choose that topic. In most of the cases, you may have to conduct the surveys and have to visit several places because this field is related to Social Science. Also, you may have to do a lot of work to find all rise and falls regarding the various data of that subject. Sometimes, detailed information plays a vital role, instead of short information.

**2. Evaluators are human:** First thing to remember that evaluators are also human being. They are not only meant for rejecting a paper. They are here to evaluate your paper. So, present your Best.

**3. Think Like Evaluators:** If you are in a confusion or getting demotivated that your paper will be accepted by evaluators or not, then think and try to evaluate your paper like an Evaluator. Try to understand that what an evaluator wants in your research paper and automatically you will have your answer.

**4. Make blueprints of paper:** The outline is the plan or framework that will help you to arrange your thoughts. It will make your paper logical. But remember that all points of your outline must be related to the topic you have chosen.

**5. Ask your Guides:** If you are having any difficulty in your research, then do not hesitate to share your difficulty to your guide (if you have any). They will surely help you out and resolve your doubts. If you can't clarify what exactly you require for your work then ask the supervisor to help you with the alternative. He might also provide you the list of essential readings.

**6. Use of computer is recommended:** At a first glance, this point looks obvious but it is first recommendation that to write a quality research paper of any area, first draft your paper in Microsoft Word. By using MS Word, you can easily catch your grammatical mistakes and spelling errors.

**7. Use right software:** Always use good quality software packages. If you are not capable to judge good software then you can lose quality of your paper unknowingly. There are various software programs available to help you, which you can get through Internet.



**8. Use the Internet for help:** An excellent start for your paper can be by using the Google. It is an excellent search engine, where you can have your doubts resolved. You may also read some answers for the frequent question how to write my research paper or find model research paper. From the internet library you can download books. If you have all required books make important reading selecting and analyzing the specified information. Then put together research paper sketch out.

**9. Use and get big pictures:** Always use encyclopedias, Wikipedia to get pictures so that you can go into the depth.

**10. Bookmarks are useful:** When you read any book or magazine, you generally use bookmarks, right! It is a good habit, which helps to not to lose your continuity. You should always use bookmarks while searching on Internet also, which will make your search easier.

**11. Revise what you wrote:** When you write anything, always read it, summarize it and then finalize it.

**12. Make all efforts:** Make all efforts to mention what you are going to write in your paper. That means always have a good start. Try to mention everything in introduction, that what is the need of a particular research paper. Polish your work by good skill of writing and always give an evaluator, what he wants.

**13. Have backups:** When you are going to do any important thing like making research paper, you should always have backup copies of it either in your computer or in paper. This will help you to not to lose any of your important.

**14. Produce good diagrams of your own:** Always try to include good charts or diagrams in your paper to improve quality. Using several and unnecessary diagrams will degrade the quality of your paper by creating "hotchpotch." So always, try to make and include those diagrams, which are made by your own to improve readability and understandability of your paper.

**15. Use of direct quotes:** When you do research relevant to literature, history or current affairs then use of quotes become essential but if study is relevant to science then use of quotes is not preferable.

**16. Use proper verb tense:** Use proper verb tenses in your paper. Use past tense, to present those events that happened. Use present tense to indicate events that are going on. Use future tense to indicate future happening events. Use of improper and wrong tenses will confuse the evaluator. Avoid the sentences that are incomplete.

**17. Never use online paper:** If you are getting any paper on Internet, then never use it as your research paper because it might be possible that evaluator has already seen it or maybe it is outdated version.

**18. Pick a good study spot:** To do your research studies always try to pick a spot, which is quiet. Every spot is not for studies. Spot that suits you choose it and proceed further.

**19. Know what you know:** Always try to know, what you know by making objectives. Else, you will be confused and cannot achieve your target.

**20. Use good quality grammar:** Always use a good quality grammar and use words that will throw positive impact on evaluator. Use of good quality grammar does not mean to use tough words, that for each word the evaluator has to go through dictionary. Do not start sentence with a conjunction. Do not fragment sentences. Eliminate one-word sentences. Ignore passive voice. Do not ever use a big word when a diminutive one would suffice. Verbs have to be in agreement with their subjects. Prepositions are not expressions to finish sentences with. It is incorrect to ever divide an infinitive. Avoid clichés like the disease. Also, always shun irritating alliteration. Use language that is simple and straight forward. put together a neat summary.

**21. Arrangement of information:** Each section of the main body should start with an opening sentence and there should be a changeover at the end of the section. Give only valid and powerful arguments to your topic. You may also maintain your arguments with records.

**22. Never start in last minute:** Always start at right time and give enough time to research work. Leaving everything to the last minute will degrade your paper and spoil your work.





- 23. Multitasking in research is not good:** Doing several things at the same time proves bad habit in case of research activity. Research is an area, where everything has a particular time slot. Divide your research work in parts and do particular part in particular time slot.
- 24. Never copy others' work:** Never copy others' work and give it your name because if evaluator has seen it anywhere you will be in trouble.
- 25. Take proper rest and food:** No matter how many hours you spend for your research activity, if you are not taking care of your health then all your efforts will be in vain. For a quality research, study is must, and this can be done by taking proper rest and food.
- 26. Go for seminars:** Attend seminars if the topic is relevant to your research area. Utilize all your resources.
- 27. Refresh your mind after intervals:** Try to give rest to your mind by listening to soft music or by sleeping in intervals. This will also improve your memory.
- 28. Make colleagues:** Always try to make colleagues. No matter how sharper or intelligent you are, if you make colleagues you can have several ideas, which will be helpful for your research.
- 29. Think technically:** Always think technically. If anything happens, then search its reasons, its benefits, and demerits.
- 30. Think and then print:** When you will go to print your paper, notice that tables are not be split, headings are not detached from their descriptions, and page sequence is maintained.
- 31. Adding unnecessary information:** Do not add unnecessary information, like, I have used MS Excel to draw graph. Do not add irrelevant and inappropriate material. These all will create superfluous. Foreign terminology and phrases are not apropos. One should NEVER take a broad view. Analogy in script is like feathers on a snake. Not at all use a large word when a very small one would be sufficient. Use words properly, regardless of how others use them. Remove quotations. Puns are for kids, not grunt readers. Amplification is a billion times of inferior quality than sarcasm.
- 32. Never oversimplify everything:** To add material in your research paper, never go for oversimplification. This will definitely irritate the evaluator. Be more or less specific. Also too, by no means, ever use rhythmic redundancies. Contractions aren't essential and shouldn't be there used. Comparisons are as terrible as clichés. Give up ampersands and abbreviations, and so on. Remove commas, that are, not necessary. Parenthetical words however should be together with this in commas. Understatement is all the time the complete best way to put onward earth-shaking thoughts. Give a detailed literary review.
- 33. Report concluded results:** Use concluded results. From raw data, filter the results and then conclude your studies based on measurements and observations taken. Significant figures and appropriate number of decimal places should be used. Parenthetical remarks are prohibitive. Proofread carefully at final stage. In the end give outline to your arguments. Spot out perspectives of further study of this subject. Justify your conclusion by at the bottom of them with sufficient justifications and examples.
- 34. After conclusion:** Once you have concluded your research, the next most important step is to present your findings. Presentation is extremely important as it is the definite medium through which your research is going to be in print to the rest of the crowd. Care should be taken to categorize your thoughts well and present them in a logical and neat manner. A good quality research paper format is essential because it serves to highlight your research paper and bring to light all necessary aspects in your research.



# Informal Guidelines of Research Paper Writing

## Key points to remember:

- Submit all work in its final form.
- Write your paper in the form, which is presented in the guidelines using the template.
- Please note the criterion for grading the final paper by peer-reviewers.

## Final Points:

A purpose of organizing a research paper is to let people to interpret your effort selectively. The journal requires the following sections, submitted in the order listed, each section to start on a new page.

The introduction will be compiled from reference matter and will reflect the design processes or outline of basis that direct you to make study. As you will carry out the process of study, the method and process section will be constructed as like that. The result segment will show related statistics in nearly sequential order and will direct the reviewers next to the similar intellectual paths throughout the data that you took to carry out your study. The discussion section will provide understanding of the data and projections as to the implication of the results. The use of good quality references all through the paper will give the effort trustworthiness by representing an alertness of prior workings. Writing a research paper is not an easy job no matter how trouble-free the actual research or concept. Practice, excellent preparation, and controlled record keeping are the only means to make straightforward the progression.

## General style:

Specific editorial column necessities for compliance of a manuscript will always take over from directions in these general guidelines.

### *To make a paper clear*

- Adhere to recommended page limits

### *Mistakes to evade*

- Insertion a title at the foot of a page with the subsequent text on the next page
- Separating a table/chart or figure - impound each figure/table to a single page
- Submitting a manuscript with pages out of sequence

### *In every sections of your document*

- Use standard writing style including articles ("a", "the," etc.)
- Keep on paying attention on the research topic of the paper
- Use paragraphs to split each significant point (excluding for the abstract)
- Align the primary line of each section
- Present your points in sound order
- Use present tense to report well accepted
- Use past tense to describe specific results
- Shun familiar wording, don't address the reviewer directly, and don't use slang, slang language, or superlatives
- Shun use of extra pictures - include only those figures essential to presenting results



### Title Page:

Choose a revealing title. It should be short. It should not have non-standard acronyms or abbreviations. It should not exceed two printed lines. It should include the name(s) and address (es) of all authors.

### Abstract:

The summary should be two hundred words or less. It should briefly and clearly explain the key findings reported in the manuscript-- must have precise statistics. It should not have abnormal acronyms or abbreviations. It should be logical in itself. Shun citing references at this point.

An abstract is a brief distinct paragraph summary of finished work or work in development. In a minute or less a reviewer can be taught the foundation behind the study, common approach to the problem, relevant results, and significant conclusions or new questions.

Write your summary when your paper is completed because how can you write the summary of anything which is not yet written? Wealth of terminology is very essential in abstract. Yet, use comprehensive sentences and do not let go readability for briefness. You can maintain it succinct by phrasing sentences so that they provide more than lone rationale. The author can at this moment go straight to shortening the outcome. Sum up the study, with the subsequent elements in any summary. Try to maintain the initial two items to no more than one ruling each.

- Reason of the study - theory, overall issue, purpose
- Fundamental goal
- To the point depiction of the research
- Consequences, including definite statistics - if the consequences are quantitative in nature, account quantitative data; results of any numerical analysis should be reported
- Significant conclusions or questions that track from the research(es)

### Approach:

- Single section, and succinct
- As a outline of job done, it is always written in past tense
- A conceptual should situate on its own, and not submit to any other part of the paper such as a form or table
- Center on shortening results - bound background information to a verdict or two, if completely necessary
- What you account in an conceptual must be regular with what you reported in the manuscript
- Exact spelling, clearness of sentences and phrases, and appropriate reporting of quantities (proper units, important statistics) are just as significant in an abstract as they are anywhere else

### Introduction:

The **Introduction** should "introduce" the manuscript. The reviewer should be presented with sufficient background information to be capable to comprehend and calculate the purpose of your study without having to submit to other works. The basis for the study should be offered. Give most important references but shun difficult to make a comprehensive appraisal of the topic. In the introduction, describe the problem visibly. If the problem is not acknowledged in a logical, reasonable way, the reviewer will have no attention in your result. Speak in common terms about techniques used to explain the problem, if needed, but do not present any particulars about the protocols here. Following approach can create a valuable beginning:

- Explain the value (significance) of the study
- Shield the model - why did you employ this particular system or method? What is its compensation? You strength remark on its appropriateness from a abstract point of vision as well as point out sensible reasons for using it.
- Present a justification. Status your particular theory (es) or aim(s), and describe the logic that led you to choose them.
- Very for a short time explain the tentative propose and how it skilled the declared objectives.



Approach:

- Use past tense except for when referring to recognized facts. After all, the manuscript will be submitted after the entire job is done.
- Sort out your thoughts; manufacture one key point with every section. If you make the four points listed above, you will need a least of four paragraphs.
- Present surroundings information only as desirable in order hold up a situation. The reviewer does not desire to read the whole thing you know about a topic.
- Shape the theory/purpose specifically - do not take a broad view.
- As always, give awareness to spelling, simplicity and correctness of sentences and phrases.

#### **Procedures (Methods and Materials):**

This part is supposed to be the easiest to carve if you have good skills. A sound written Procedures segment allows a capable scientist to replacement your results. Present precise information about your supplies. The suppliers and clarity of reagents can be helpful bits of information. Present methods in sequential order but linked methodologies can be grouped as a segment. Be concise when relating the protocols. Attempt for the least amount of information that would permit another capable scientist to spare your outcome but be cautious that vital information is integrated. The use of subheadings is suggested and ought to be synchronized with the results section. When a technique is used that has been well described in another object, mention the specific item describing a way but draw the basic principle while stating the situation. The purpose is to text all particular resources and broad procedures, so that another person may use some or all of the methods in one more study or referee the scientific value of your work. It is not to be a step by step report of the whole thing you did, nor is a methods section a set of orders.

Materials:

- Explain materials individually only if the study is so complex that it saves liberty this way.
- Embrace particular materials, and any tools or provisions that are not frequently found in laboratories.
- Do not take in frequently found.
- If use of a definite type of tools.
- Materials may be reported in a part section or else they may be recognized along with your measures.

Methods:

- Report the method (not particulars of each process that engaged the same methodology)
- Describe the method entirely
- To be succinct, present methods under headings dedicated to specific dealings or groups of measures
- Simplify - details how procedures were completed not how they were exclusively performed on a particular day.
- If well known procedures were used, account the procedure by name, possibly with reference, and that's all.

Approach:

- It is embarrassed or not possible to use vigorous voice when documenting methods with no using first person, which would focus the reviewer's interest on the researcher rather than the job. As a result when script up the methods most authors use third person passive voice.
- Use standard style in this and in every other part of the paper - avoid familiar lists, and use full sentences.

What to keep away from

- Resources and methods are not a set of information.
- Skip all descriptive information and surroundings - save it for the argument.
- Leave out information that is immaterial to a third party.



## Results:

The principle of a results segment is to present and demonstrate your conclusion. Create this part a entirely objective details of the outcome, and save all understanding for the discussion.

The page length of this segment is set by the sum and types of data to be reported. Carry on to be to the point, by means of statistics and tables, if suitable, to present consequences most efficiently.

You must obviously differentiate material that would usually be incorporated in a study editorial from any unprocessed data or additional appendix matter that would not be available. In fact, such matter should not be submitted at all except requested by the instructor.

## Content

- Sum up your conclusion in text and demonstrate them, if suitable, with figures and tables.
- In manuscript, explain each of your consequences, point the reader to remarks that are most appropriate.
- Present a background, such as by describing the question that was addressed by creation an exacting study.
- Explain results of control experiments and comprise remarks that are not accessible in a prescribed figure or table, if appropriate.
- Examine your data, then prepare the analyzed (transformed) data in the form of a figure (graph), table, or in manuscript form.

## What to stay away from

- Do not discuss or infer your outcome, report surroundings information, or try to explain anything.
- Not at all take in raw data or intermediate calculations in a research manuscript.
- Do not present the similar data more than once.
- Manuscript should complement any figures or tables, not duplicate the identical information.
- Never confuse figures with tables - there is a difference.

## Approach

- As forever, use past tense when you submit to your results, and put the whole thing in a reasonable order.
- Put figures and tables, appropriately numbered, in order at the end of the report
- If you desire, you may place your figures and tables properly within the text of your results part.

## Figures and tables

- If you put figures and tables at the end of the details, make certain that they are visibly distinguished from any attach appendix materials, such as raw facts
- Despite of position, each figure must be numbered one after the other and complete with subtitle
- In spite of position, each table must be titled, numbered one after the other and complete with heading
- All figure and table must be adequately complete that it could situate on its own, divide from text

## Discussion:

*The Discussion is expected the trickiest segment to write and describe. A lot of papers submitted for journal are discarded based on problems with the Discussion. There is no head of state for how long a argument should be. Position your understanding of the outcome visibly to lead the reviewer through your conclusions, and then finish the paper with a summing up of the implication of the study. The purpose here is to offer an understanding of your results and hold up for all of your conclusions, using facts from your research and generally accepted information, if suitable. The implication of result should be visibly described. Infer your data in the conversation in suitable depth. This means that when you clarify an observable fact you must explain mechanisms that may account for the observation. If your results vary from your prospect, make clear why that may have happened. If your results*





agree, then explain the theory that the proof supported. It is never suitable to just state that the data approved with prospect, and let it drop at that.

- Make a decision if each premise is supported, discarded, or if you cannot make a conclusion with assurance. Do not just dismiss a study or part of a study as "uncertain."
- Research papers are not acknowledged if the work is imperfect. Draw what conclusions you can based upon the results that you have, and take care of the study as a finished work
- You may propose future guidelines, such as how the experiment might be personalized to accomplish a new idea.
- Give details all of your remarks as much as possible, focus on mechanisms.
- Make a decision if the tentative design sufficiently addressed the theory, and whether or not it was correctly restricted.
- Try to present substitute explanations if sensible alternatives be present.
- One research will not counter an overall question, so maintain the large picture in mind, where do you go next? The best studies unlock new avenues of study. What questions remain?
- Recommendations for detailed papers will offer supplementary suggestions.

Approach:

- When you refer to information, differentiate data generated by your own studies from available information
- Submit to work done by specific persons (including you) in past tense.
- Submit to generally acknowledged facts and main beliefs in present tense.

## Administration Rules Listed Before Submitting Your Research Paper to Global Journals Inc. (US)

*Please carefully note down following rules and regulation before submitting your Research Paper to Global Journals Inc. (US):*

**Segment Draft and Final Research Paper:** You have to strictly follow the template of research paper. If it is not done your paper may get rejected.

- The **major constraint** is that you must independently make all content, tables, graphs, and facts that are offered in the paper. You must write each part of the paper wholly on your own. The Peer-reviewers need to identify your own perceptive of the concepts in your own terms. NEVER extract straight from any foundation, and never rephrase someone else's analysis.
- Do not give permission to anyone else to "PROOFREAD" your manuscript.

**Written Material:** You may discuss with your guides and key sources.

- Do not copy or imitate anyone else paper. (Various Methods to avoid Plagiarism is applied by us on every paper, if found guilty, you will be blacklisted by all of our collaborated research groups, your institution will be informed for this and strict legal actions will be taken immediately.)
- To guard yourself and others from possible illegal use please do not permit anyone right to use to your paper and files.



## Criterion for Grading a Research Paper *(Compilation)* by Global Journals Inc. (US)

Please note that following table is only a Grading of "Paper Compilation" and not on "Performed/Stated Research" whose grading solely depends on Individual Assigned Peer Reviewer and Editorial Board Member. These can be available only on request and after decision of Paper. This report will be the property of Global Journals Inc. (US).

Topics	Grades		
	A-B	C-D	E-F
<i>Abstract</i>	Clear and concise with appropriate content, Correct format. 200 words or below	Unclear summary and no specific data, Incorrect form  Above 200 words	No specific data with ambiguous information  Above 250 words
<i>Introduction</i>	Containing all background details with clear goal and appropriate details, flow specification, no grammar and spelling mistake, well organized sentence and paragraph, reference cited	Unclear and confusing data, appropriate format, grammar and spelling errors with unorganized matter	Out of place depth and content, hazy format
<i>Methods and Procedures</i>	Clear and to the point with well arranged paragraph, precision and accuracy of facts and figures, well organized subheads	Difficult to comprehend with embarrassed text, too much explanation but completed	Incorrect and unorganized structure with hazy meaning
<i>Result</i>	Well organized, Clear and specific, Correct units with precision, correct data, well structuring of paragraph, no grammar and spelling mistake	Complete and embarrassed text, difficult to comprehend	Irregular format with wrong facts and figures
<i>Discussion</i>	Well organized, meaningful specification, sound conclusion, logical and concise explanation, highly structured paragraph reference cited	Wordy, unclear conclusion, spurious	Conclusion is not cited, unorganized, difficult to comprehend
<i>References</i>	Complete and correct format, well organized	Beside the point, Incomplete	Wrong format and structuring



# INDEX

---

---

## A

acquisition · 22, 30, 31, 32, 33, 35, 40  
Agriculture · 2, 21, 25, 29  
appropriated · 35  
arguments · 2, 7, 55  
*attitudes* · 34, 55, 70, 71, 72, 73, 74, 76  
awareness · 2, 11, 35, 63, 64, 66, 68

---

## B

Begging · 2, 17, 18, 20, 23, 24  
behaviour · 55, 56, 57, 59, 60, 61, 63, 64, 65, 67, 68, 69  
beneficiaries · 17, 21  
Burton · 71, 78  
business · 17, 22, 23, 32, 38, 44, 46, 50, 52

---

## C

change · 2, 4, 5, 8, 12, 24, 34, 36, 37, 38, 40, 44, 45, 46, 49, 50, 52, 53, 56, 69  
city · 11, 17, 18, 19, 20, 21, 22, 24, 25, 26, 27, 29, 51, 72  
clarifying · 8  
Climate · 2, 25, 28, 29, 44, 45, 52, 54  
climatological · 27  
communal · 12  
communication · 2, 3, 4, 5, 6, 7, 8, 11, 12, 14, 15, 34, 35, 47, 56, 63  
comprehensive · 3, 17, 18, 21  
computerization · 35  
Consequently · 31, 32, 36, 40, 47, 50, 77  
consumed · 45, 48, 49  
consumption · 26, 44, 45, 47, 49, 50, 51, 52, 53  
contamination · 71  
Controls · 17  
Cultural · 13, 14, 17, 24, 42  
cyber · 2, 3, 5, 6, 7, 8, 9, 10, 11, 12  
Cyberactivism · 11, 14, 15

---

## D

degradation · 53  
deliberately · 39  
demographic · 55, 56, 57, 65  
Destitution · 20, 23, 24  
Disability · 17  
disseminated · 64  
Downing · 3, 5, 7, 13

---

## E

ecological · 44, 46, 47, 49, 50, 53, 55, 56, 57, 58, 59, 60, 61  
*Economic* · 2, 21, 24, 44, 50, 70, 72, 73, 74, 75, 76, 77  
educational · 30, 31, 32, 33, 34, 35, 38, 39, 40, 73  
embodied · 31, 35, 40  
enlightenment · 23, 68  
environment · 6, 11, 12, 17, 23, 25, 26, 31, 34, 35, 37, 40, 44, 70  
*Environment* · 54, 70, 77, 78  
Environmental · 6, 13, 24, 25, 29, 54, 68, 70, 77, 78  
erroneously · 66, 67

---

## F

Facebook · 10, 11  
*Facility* · 70, 75, 78  
factor · 18, 19, 25, 55, 59, 60, 61  
forest · 44, 45, 46, 47, 48, 50, 51, 52, 53, 54  
Foundations · 15, 41  
Fuel · 2, 44, 49, 51, 54

---

## G

Gbadegesin · 53, 54, 77  
*Geographical* · 29, 55  
Globalization · 13, 15, 16  
Greensboro · 13

---

## H

Habermas · 2, 7, 14  
HIV/AIDS · 62, 63, 64, 65, 66, 67, 68, 69  
homogenous · 7  
humid · 47, 53

---

## I

Ilorin · 2, 24, 25, 26, 27, 28, 29, 63, 65, 68  
implication · 18, 19, 23, 47, 50, 52, 53, 65, 73, 77  
improvement · 29, 30, 32, 35  
incumbent · 23, 24  
inspirational · 36, 38  
institutions · 7, 30, 32, 33, 34, 35, 38, 39, 46, 49, 63, 64, 65, 66, 67, 68, 73  
intellectual · 36, 39  
intensified · 63, 64, 68  
intercourse · 55, 56, 57, 58, 59, 60, 61, 64, 65  
International · 4, 5, 8, 13, 14, 15, 16, 29, 30, 41, 42, 43, 54, 61, 68, 77  
interviewees · 10

---

## K

knowledge · 10, 12, 25, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 63, 65, 66, 67, 68, 71, 73

---

## L

*Landfills* · 70, 73, 74, 78  
lunatics · 24

---

## M

mainstream · 4, 7, 46, 53  
management · 18, 21, 22, 23, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 44, 45, 46, 53, 70, 72, 74  
medical · 66, 67  
movements · 2, 3, 4, 5, 6, 7, 8, 11, 14, 38  
Municipal · 78

---

## N

naira · 51  
Nationalities · 57, 58, 60, 61  
networks · 2, 3, 4, 5, 7, 9, 10, 11, 12, 14

Nigeria · 6, 2, 17, 18, 24, 25, 26, 27, 28, 29, 44, 45, 46, 47, 48, 50, 51, 53, 54, 63, 64, 65, 66, 67, 68, 69, 70, 73, 77, 78

---

## O

Olushosun · 70, 72, 73, 74, 75, 76  
*Organization* · 8, 14, 21, 30, 34, 39, 41, 42, 62, 69  
Other · 17, 19, 21, 22, 23, 64, 65

---

## P

parameters · 25, 27, 28  
perceived · 32, 55, 70, 71, 72, 73, 74, 76, 77  
phenomenon · 4, 18, 24, 64  
Philanthropic · 22  
Physical · 17, 18, 72  
physiology · 53  
Planning · 17, 24, 41, 61, 63, 68  
political · 2, 3, 4, 5, 6, 7, 8, 11, 12, 57, 72  
Process · 2  
protesters · 2, 5, 12

---

## Q

Question · 17  
quintile · 56, 57, 59, 60

---

## R

Regardless · 17, 71  
*Relationship* · 28, 75  
removal · 44, 45, 46, 49, 50, 53  
reproductive · 57  
Reproductive · 61, 62, 69  
responsibilities · 20, 21, 22  
*Risks* · 70, 71, 72, 77, 78

---

## S

safeguarded · 51  
savanna · 25, 44, 46, 47, 48, 50, 51, 52, 53  
sexual · 55, 56, 57, 58, 59, 60, 61, 63, 64, 65, 66, 67, 68  
social · 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 17, 21, 22, 23, 24, 32, 33, 35, 36, 38, 55, 56, 61, 71, 72, 73  
societies · 2, 4, 20  
socio · 2, 3, 5, 11, 12, 17, 18, 19, 20, 21, 22, 44, 46, 47, 50, 55, 56, 57, 59, 65, 71, 72, 73  
Socio · 2, 17, 20, 21, 24, 44, 47, 50, 65, 72, 73

*Solid* · 70, 78  
spaces · 2, 3, 4, 5, 9, 11, 23, 24, 36  
Statistical · 28, 46  
Strachan · 56, 61  
straightforward · 30  
structure · 3, 5, 30, 36, 37, 38, 39, 65, 71  
subsidy · 44, 45, 50, 53  
Syndrome · 17, 24, 64, 70

---

## ***T***

tendency · 26  
tertiary · 63, 64, 66, 67, 68, 69  
transported · 49

---

## ***U***

ubiquitous · 18  
universities · 39, 65, 68  
urban · 3, 9, 11, 12, 17, 18, 20, 22, 24, 25, 29, 49, 50, 51, 53, 56,  
57, 59, 70, 72, 73, 77

urbanization · 17, 18, 20, 23

---

## ***V***

variable · 19, 57, 73, 74  
virtual · 2, 4, 6, 7, 8, 11, 12

---

## ***W***

Walgrave · 6, 16  
*Waste* · 29, 70, 72, 75, 77, 78  
wood · 44, 45, 50, 51  
Workshop · 54, 78

---

## ***Z***

zones · 18, 44, 46, 47, 49, 50, 52, 53, 70, 72, 73, 74, 75, 76





save our planet



# Global Journal of Human Social Science

Visit us on the Web at [www.GlobalJournals.org](http://www.GlobalJournals.org) | [www.SocialScienceResearch.org](http://www.SocialScienceResearch.org)  
or email us at [helpdesk@globaljournals.org](mailto:helpdesk@globaljournals.org)



ISSN 9755861

© 2011 by Global Journals