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IJIPC is being positioned as an internationally refereed journal published bi-annually in (May and November) by the Faculty of Communication and Information Sciences, University of Ilorin, Nigeria. Thus, issues will be identified as Volume 1, (Issue 1, May/June), 2013, Vol. 1, (Issue 2, November/December), 2013 etc. It is dedicated to the exchange of the latest research and practical information in the field of data/information processing, communication and management. The journal publishes original research and case studies by academic, business and government contributors on the key areas of computing, information science, library science, telecommunication and mass communication including best practices, policies, and guidelines.

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EDITORIAL PREFACE

There are seven articles in this issue. The first one focuses on open access and print publishing. In this article Priti Jain and Infila through a desktop literature and review and viewpoint range of concerns were raised about the quality of OA publications such as, not peer reviewed, charging from the authors, not recognized for promotions, which makes academia to shy away from OA publishing. Laaro, Omoloshio and Bello examined the trends of specialisation among students who enrolled for mass communication studies in selected Nigerian tertiary institutions. They reported that that majority of students prefer public relations, advertising or broadcasting rather than journalism as a field of specialisation. Guang and Warnings focus on factors that affect Weibo participants' probability to re-tweet tweets from commercial organizations. They examine from the re-tweeters' perspectives, the characteristics of tweets that have a higher probability of being re-tweeted. Recommendations to increase the likelihood of a tweet being re-tweeted to enhance information flows for the beneficiary organization were highlighted.

In the fourth article, Afolayan examined personality types as correlate of Internet dependence and specific usages such as browsing, instant messaging, social network media, internet games and others amongst University of Ilorin students. Findings from the data analyses revealed significant positive and negative relationships established between three personality types (Extroversion, Neuroticism and Psychoticism) and specific internet usages. It was recommended that future studies should consider the impact of well-being outcomes on internet dependence and specific internet usages such as relationship problems, academic failure, self-esteem, social support, loneliness and anxiety. It was concluded that by doing this, socio psychological problems emanating from excessive internet usage by campus students can be alleviated and controlled. Thanuskodi examines a bibliometric analysis of the journal titled "Current Science" for the period between 2006 to 2010. The author recommends the need for an editorial policy that would encourage usage and citation of electronic resources by the contributors to the journal. The author considered this necessary because the ratio of electronic citation to print citation is too low. Faruk and Gana use OPTSIM (Optical Simulator) simulation environment to create a model using single mode fiber (SMF) in the C band region of optical wavelength. Simulation results shows degradation in the bit error rate (BER) as the length increase and this is due to the effect of dispersion across the link. Otiike and Maseh-Yego report the results of a research undertaken as part of an M Phil programme carried out to investigate disaster preparedness and planning at the Learning Resource Center (LRC), Moi University. They conclude with a recommendation that the LRC should put in place a disaster preparedness policy and formally establish the disaster management committee.

The Last paper by Azeez and Awobamise investigate Nigerian youths' exposure to foreign television programmes with the aim of validating or invalidating the major proposition of the cultural imperialism thesis. The paper determines the extent of the influence of the cumulative exposure of Nigerian youths to foreign television programmes on the cultural patterns or ways of life of the youths. They conclude that in spite of the criticism of cultural imperialism thesis by some scholars, its assumptions are still a reality among Nigerian youths.

Open Access versus Print Publishing: A case of Academic Journal Publishers

By

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Abstract:

Increasingly, Open Access (OA) is being recognized as a well-accepted alternative to traditional publishing and knowledge dissemination and exchange. Given the low profile of African publication in the global scholarly publishing system, African scholars and researchers are more and more considering OA as the future of knowledge sharing and scholarly communication. However, there are debates on the quality and importance of OA material opposed to traditional print publications. A range of concerns are raised about the quality of OA publications such as, not peer reviewed, charging from the authors, not recognized for promotions, which makes academia to shy away from OA publishing. This paper is motivated to analyze the quality of OA publications in relation to traditional print publication and finally, the paper puts forward some recommendations. This paper is based on desktop literature review and viewpoint.

Key words: Open Access publishing, Open Access, Digital Scholarship, Knowledge dissemination, Scholarly Communication.

Introduction

Traditionally, there was only one publishing model for scholarly communication, which was subscription based. Due to internet and other digital technologies, today information is multiplying by seconds and access to information has become more critical than ever before. Consumer needs and expectations have drastically changed, which necessitated to change the information access environment. Consequently, at present we have a number of publishing models, such as, peer-reviewed pure-electronic journals, hybrid paper-electronic journals, free online access to all peer-reviewed literature, authors posting their articles on their own Web sites. Among the existing models, the most dominating appears be peer-reviewed pure-electronic journal publications, which is the focus of this paper. Due to the ability to produce born digital and digitization of print resources, information can be easily stored and disseminated globally to all, who have network connectivity. An increased access to information directly benefits to researchers, authors and academic institutions and therefore they have come up with a solution of alternative publishing known as today widely known as Open Access Publishing (OAP).

Open access can close the information gap between developed and less developed countries through providing free access to information for educational, learning,

cultural, scientific research and community development. OA increases knowledge sharing within research and educational institutions, scientific communities and results in improved economy and poverty alleviation. However, the quality of OA publications is still questioned. This paper is an attempt to deliberate and clarify some of the major issues concerning the quality of OA academic journal publications over traditional or conventional journal publications.

Concept of Open Access

Open access emerged as a respond to address the problem of escalating cost of scholarly and scientific journals. High subscriptions rates of scholarly and scientific journals had made restricted their access to researchers, academics, and students. There was also a large price discrepancy between individual and institutional subscription rates. The emergence of OA has helped in breaking the monopoly of traditional publishers.

A leading OA scholar Steven Harnad (2008), has described the characteristics of OA as, "Information, which is Free, immediate, permanent, full-text, on-Line and accessible" Harnad suggests three main justifications of OA: "to maximise the uptake, usage, applications and impact of the research output of your university; to measure and reward the uptake, usage, applications and impact of the research output of your university (research metrics) and, to collect, manage and showcase a permanent record of the research output and impact of your university". Another OA proponent Peter Suber (2004) defines OA literature as "digital, online, free of charge, and free of most copyright and licensing restrictions". It can be accessed by anyone who has internet facilities. Suber also states that OA contents are not restricted only to peer-reviewed research articles; they can be in any format, from texts and data to software, audio, video, and multi-media.

From the above, it is obvious that OA movement seeks to increase the availability of scholarly publications, free access and dissemination of information worldwide to all members of the society for economic, social, and political development. However, it is to be noted that OA is not identical to universal access.

As the founding stones, there were three major initiatives towards open access movement: the Budapest Open Access Initiative (BOAI), Bethesda statement and Berlin Declaration. "Open access" term was coined in 2001 with the Budapest Open Access Initiative (BOAI) and the two strategies of Green OA (self-archiving) and Gold OA (open access publishing) were devised (Poynder, 2010). The "golden road" of OA journal publishing is where journals provide OA to their articles (either by charging the author-institution for refereeing/publishing outgoing articles instead of charging the user-institution for accessing incoming articles, or by simply making their online edition free for all). The "green road" of OA self-archiving is where authors provide OA to their own published articles, by making their own e-prints free for all (Harnad, 2012). Thus, there are 2 routes for OA publishing. Gold OA is publishing in an open access journal, it can be a fully OA journal or optional OA in traditional journals, whereas, Green OA refers to depositing articles in an OA repositories, which can be subject repositories, institutional repositories or national repositories. The focus of this paper is Gold OA publishing.

According to the Bethesda Statement on Open Access Publishing (2003), an OA publication is one that meets the following two conditions:

- “The author(s) and copyright holder(s) grant(s) all users a free, irrevocable, worldwide, perpetual right of access to, and a license to copy, use, distribute, transmit and display the work publicly, and to make and distribute derivative works, in any digital medium for any responsible purpose, subject to proper attribution of authorship, as well as the right to make small numbers of printed copies for their personal use”.
- “A complete version of the work and all supplemental materials, including a copy of the permission as stated above, in a suitable standard electronic format is deposited immediately upon initial publication in at least one online repository that is supported by an academic institution, scholarly society, government agency, or other well-established organization that seeks to enable open access, unrestricted distribution, interoperability, and long-term archiving (for the AVUical sciences, PubMed Central is such a repository)”

Therefore, OA publishing can be characterised as below:

- OA publishing ensures the free and immediate availability of scholarly publication.
- It is free of unnecessary copyright and licensing restrictions
- Material is available full text online.
- OA content can be accessed by anybody from anywhere without any cost and discrimination.
- Material can be freely used by anyone, for copying and downloading.
- OA publications can be in any format from texts and data to software, audio, video, and multi-media.
- The publisher charges directly for the service of publication/ dissemination (APC's) (Kuhn, 2012).
- OA publications are licensed for redistribution and reuse (Creative Commons) (Kuhn, 2012).
- They are archived in an internationally recognized repository (e.g. PubMed Central) - permanently archived in multiple locations to ensure long term access (Kuhn, 2012).

Traditional Publishers' initiatives in response to Open Access

Over the last two decades traditional publishing of scientific peer-reviewed journal articles has gone under a revolution prompted by the technology and the internet in the form of electronic publishing. Facing the threat from OA, traditional journal publishers have come up with the following two initiatives:

E-Print Archive: E-prints are electronic copies of academic research papers and they can be ‘pre-prints’ or ‘post-prints’. They may be journal articles, conference papers, book chapters or any other form of research output. Typically, an e-print archive is normally made freely available on the web. The most successful and the best known open access e-print archive is arXiv. It provides Open access to 787,494 e-prints in Physics, Mathematics, Computer Science, Quantitative Biology, Quantitative Finance and Statistics (Cornell University Library, 2012). Another well-established e-print archive is CogPrints, which an electronic archive for self-archive papers in any area of

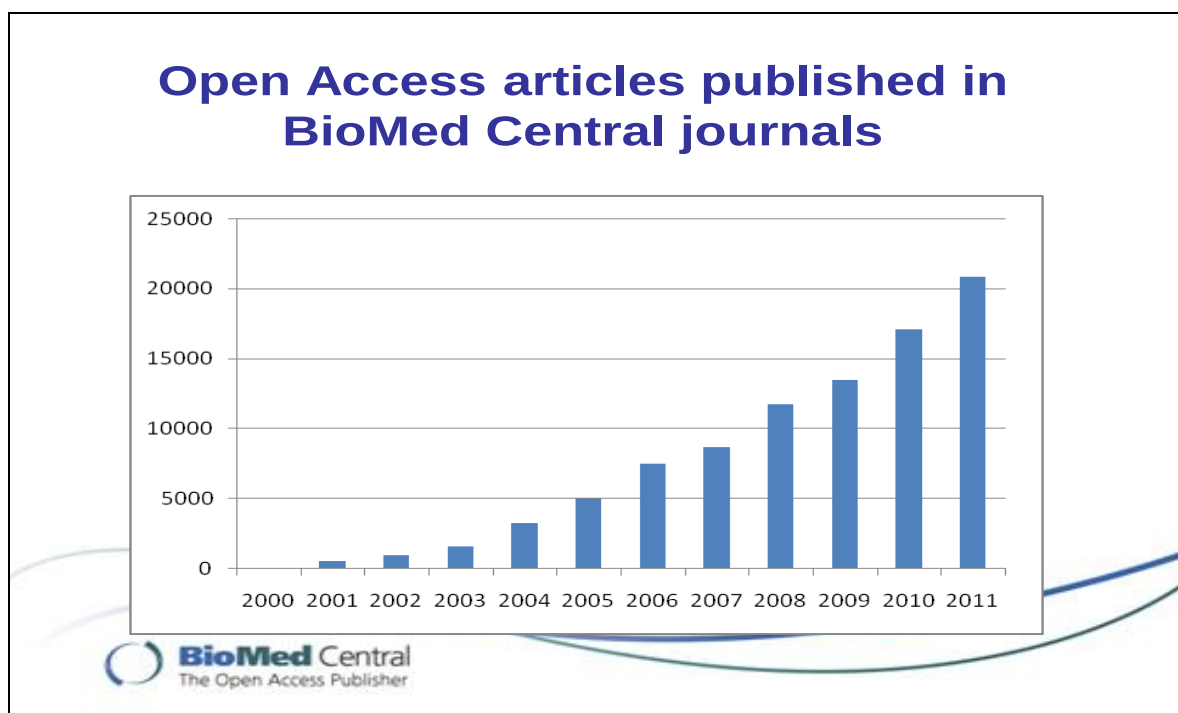
Psychology, Neuroscience, and Linguistics, and many areas of Computer Science, Philosophy, Biology, Medicine, Anthropology and physical, social and mathematical sciences that are pertinent to the study of cognition (Pinfield, Gardner and MacColl, 2002). The original proposal for an archive of e-prints that were posted by their authors was transformed into PubMed Central, where scientific societies and journal review boards decide which articles will be posted, and all of the posted materials must be substantively reviewed before they are posted (Kling, Spector, and McKim, 2002).

Conversion to Open Access Publishing

Founded in 1997, Hindawi Publishing Corporation was the first subscription publisher to convert its entire portfolio of journals to Open Access (OA). Due to this the company has grown rapidly. Hindawi's growth story has posed a number of questions, however it publishes over 400 OA journals and it is considered as a respectable and responsible publisher (Hindawi, 2012a). Hindawi Publishing Corporation had received over 5,400 submissions in March 2012, an increase of 80% from March 2011 (Hindawi, 2012b).

The Big Deal: Facing the threat of OA, traditional journal publishers have made subscription based journals more affordable introducing "the Big Deal". In the Big Deal, if one signs up with a traditional publisher for three years subscription, is entitled to get access online not only to the journals to which the subscription has been in print until now but also the complete portfolio of publisher X or publisher Y, every journal that they publish. Libraries are resistant to get out of this attractive deal (Cramond, 2011).

Introduction of conventional journals: This is publishing on an open access rather than a subscription model. In conventional journal publishing the most successful publisher [BioMed Central](#), which was spun off from a conventional publishing house. They have since been acquired by [Springer](#), the second or third largest conventional publisher but the open access model has remained in place. Springer bought BioMed Central, this is significant showing Springer's deep interest in flipping the business model and moving in an orderly way towards an open access model. In this model the author pays the cost of publication of the article, which is free for anyone to consume (Cramond, 2011). BioMed Central is an STM (Science, Technology and Medicine) publisher of 220 open access, online, peer-reviewed journals. The portfolio of journals spans all areas of biology and medicine and includes broad interest titles, such as BMC Biology and BMC Medicine alongside specialist journals, such as Retrovirology and BMC Genomics. (BioMed Central, 2012).



Source: Kuhn (2012).

Launch of HINARI: Other initiative includes [HINARI](#), a [World Health Organisation brokered initiative](#) that allows free access of online collections of 250 publishers to third world countries that includes the major publishers like [Elsevier](#), [Springerlink](#) and [Wiley](#) (Cramond, 2011). HINARI Access to Research in Health Programme provides free or very low cost online access to the major journals in biomedical and related social sciences to local, not-for-profit institutions in developing countries. It was launched in January 2002, with about 1500 journals from 6 major publishers: Blackwell, Elsevier Science, the Harcourt Worldwide STM Group, Wolters Kluwer International Health & Science, Springer Verlag and John Wiley. Today more than 150 publisher partners are offering more than 15,000 information resources in HINARI and many others are joining the programme. More than 8,500 journals and 7000 e-books (in 30 different languages) are now available to health institutions in more than 100 countries, areas and territories benefiting many thousands of health workers and researchers, and in turn, contributing to improve world health (HINARI, 2012).

Current OA journal status

Submissions to OA journals grew by over 35% between 2010 and 2011 . Add more from DOAJ. Currently, there are over 6400 open access journals in the DOAJ. Over 1000 open access journals are indexed by ISI. There are 8370 journals in DOAJ, of which 4131 journals are searchable at article level and DOAJ provides access to 930329 articles. Submissions to OA journals grew by over 35% between 2010 and 201. Open access to research is now mandated in over 110 institutions and by 47 funders. Let us have a glimpse at the status of OA journals in Africa.

Table 1: List of African Journals in DOAJ (Source: DOAJ, 2012).

Country	OA Journals Year 2012
Algeria	1
Cote d'Ivoire	1
Madagascar	1
Sierra Leone	1
Ghana	3
Libya	2
Mauritius	2
Tanzania	4
Uganda	4
Ethiopia	5
Kenya	6
Morocco	6
Tunisia	10
Nigeria	26
South Africa	54
Egypt	344
Total	470

The above table clearly shows that, despite numerous initiatives towards OA publishing, Africa still lags behind. Of 8370 DOAJ journals, only 470 (5.61%) are from Africa. The percentage of total DOAJ journals produced from the region is less than the percentage of use of the service. This is also evident in the comparison between the use and production of DOAJ journals in Latin America and Caribbean against that of Sub-Saharan Africa (Bowdoin, 2011). However, increasing number of OA journals is encouraging. About four months ago in July 2012 the number of OA journals was 428 (3.21%) and now it has increased to 470.

Major concerns and issues against open access publishing

There has been a growing battle between open access and traditional publishers. Still eighty five percent (85%) of published papers remain locked behind subscription pay walls, which are accessible only to those affiliated with universities and other large research institutions, which afford the subscription prices. But new journals that make everything they publish freely available are growing rapidly (Eisen, 2012). However, OA publishing is often questioned on the following grounds:

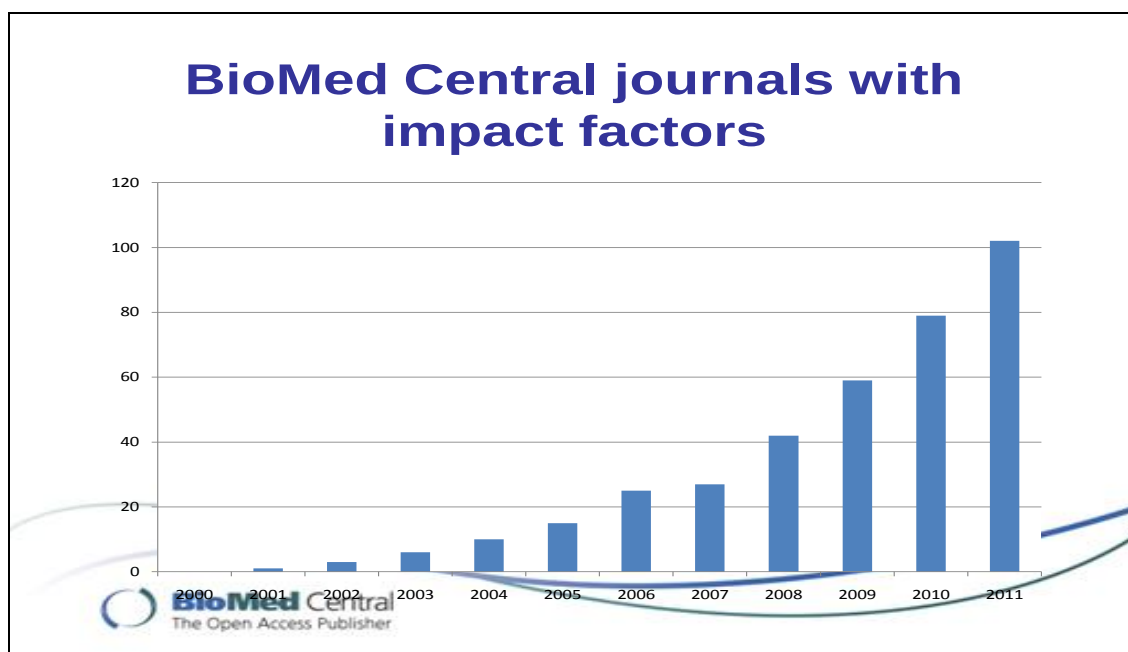
Quality issue: Quality of open access publishing is an issue of serious concern. The quality of OA publishing can be measured by the impact factors calculated from citation data. [Bo-Christer Björk](#) and [David Solomon](#) compared the impact factors of 610 open access journals and 7,609 subscription journals using Web of Science citation data, while an overlapping set of 1,327 OA journals were compared with 11,124 subscription journals using Scopus data. The results reveal that the citation rate for subscription journals was about 30% higher than for open access ones but this

difference was largely due to a high share of older OA journals, particularly from regions like Latin America in the citation indexes. When like was compared with like, for instance, journals founded after 2000, the differences disappeared. The authors conclude that OA journals indexed in Web of Science and/or Scopus are approaching the same scientific impact and quality as subscription journals. Both of these publishing business models produce high quality peer reviewed articles (Björk and Solomon, 2012; O'Keefe, 2012; Science Daily, 2012).

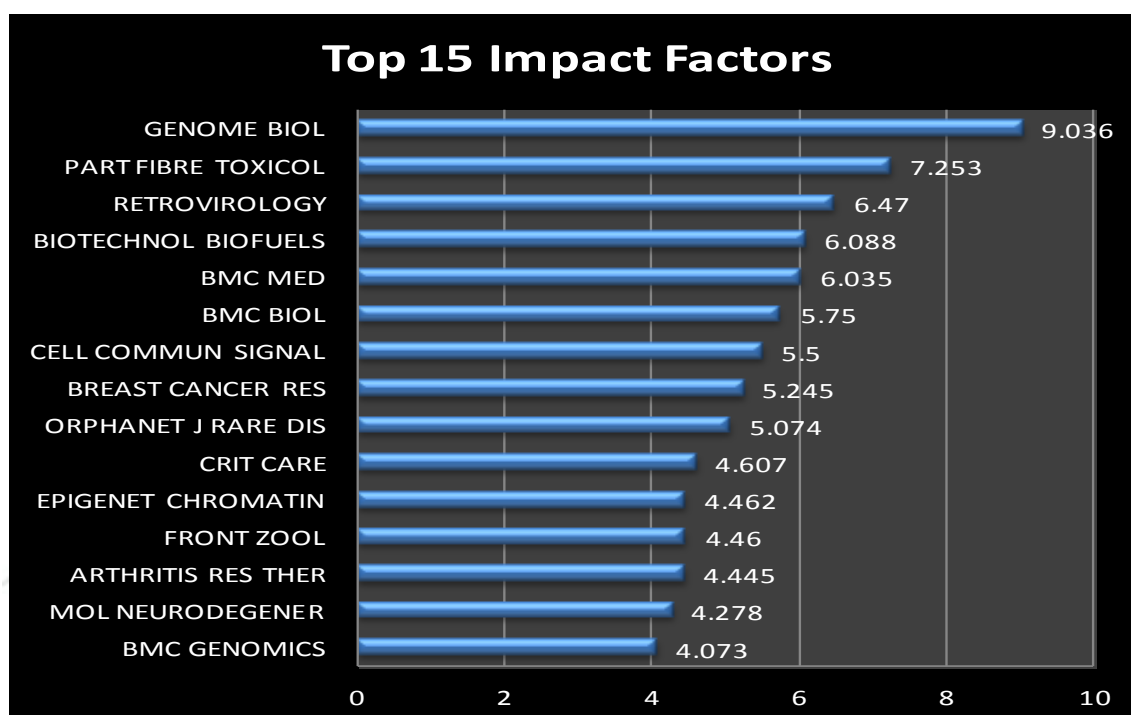
Not peer reviewed: Another measure and quality control factor is peer review process. Quality of Open Access journals is often criticised for not peer reviewed. According to University of Florida Libraries (2012) "Open Access journals are of low quality, are not peer reviewed and are the equivalent of self-publishing and thus will be looked down upon by my colleagues and peers". Open Access publishers like PLoS and BioMed Central (BMC) have proved that it is possible to build thriving businesses providing immediate free access to everything published. There is also criticism that many of their journals (e.g. PLoS ONE and most BMC) only assess the technical merits of submitted works (Eisen, 2012). Contrary to it, most open access journals are peer reviewed with the same or higher standards as traditional scholarly journals. Many open access journals engage in traditional peer review and selection and publish only those papers, they deem of sufficient importance. This is evident from numerous studies as cited by Wagner (2010), who points out that, "no study has ever claimed that OA articles were cited less than TA articles". SAGE Open manuscripts are vetted by SAGE staff and are credentialed and qualified peers are thoroughly able to determine whether the research presented in a manuscript is methodologically or scientifically sound. This standard for acceptance is different than most traditional journals; the thematic significance or incremental contribution of a given paper is not taken into consideration. This is SAGE concern about the quality of papers published in SAGE Open (Sage Publications, 2012). Therefore, Open access journals are not different from toll access journals in their commitment to peer review, but only in their cost-recovery model, which has no bearing on the quality of the articles they publish (eifl, 2012). Open access journals go through a peer review process same as subscription-based traditional journals.

Impact factor: There have been studies showing an increase in impact by publishing in open access journals because of larger dissemination and increased accessibility (Fruin, 2012). Open Access helps research to be carried out more efficiently by reducing duplication and blind alley research, by enabling researchers to find what they need more quickly and without cost and by helping researchers develop and diffuse the use of open standards. It makes possible better peer review and other methods of upholding academic rigour because researchers can easily see and judge the work of their peers and can access data for re-analysis and independent confirmation of findings. It also encourages collaborative endeavours by making research visible to new communities, including the general population (Swan, 2010). There is also citation impact on open access published articles. "Articles published immediately as open access on a journal web site have higher impact than self-archived or otherwise OA articles. The authors found strong evidence that, even in a journal that is widely available in research libraries, OA articles are more immediately recognized and cited by peers than non-OA articles published in the same journal"

(Eysenbach, 2006 in Wenger, 2010). The following 2 Figures show BioMed Central journals with impact factors:



Source: Kuhn (2012).



Source: Kuhn (2012).

It is clearly evident from the above 2 Figures that OA publications have greater impact than the traditional publications. Good impact factors have helped many BioMed Central journals to grow than conventional publications (Kuhn, 2012).

Not considered for promotions: Journal articles are important for academia and it has become the principal measure of academic achievement in many disciplines (Willinsky, 2009). In other words, the academic's life is tied up in getting published in those high-impact journals and those journals are published by conventional subscription publishers. Still many academic institutions do not consider OA publications worthy to consider for promotions or recognition. As stated by Papin–Ramcharan and Dawe (2006), one lecturer's publication in an open access journal was refused to be considered for his promotion by the University's promotion committee, since he had paid money to publish in open access journals, which is the usual way to publish in an open access journal. This is why some scholars are reluctant to publish in OA journals. However, gradually people mind-sets are changing. In many countries, financial reward and career advancement depends on publication in ISI tracked journals (Kuhn, 2012).

“Author pays” business model: A common misunderstanding is that all OA journals use an "author pays" business model, which is not true. For example, Latin America has 10 models of OA and Scholarly Publishing: Homepage open access, Open access e-print archive, Author fee open access, Subsidized open access, Dual-mode open access, Delayed Open Access, Partial open access, Per capita open access, Open access indexing and Open access cooperative and all these use a different approach (Alperin, Fischman & Willinsky, 2008). The author is free to opt for any of the three models to publish according to his/her requirements and limitations. As noted by Suber (2012), another misinterpretation is to assume that charging an upfront fee is an "author pays" model. Research shows that 70% OA journals do not charge any author-side fees, whereas, 75% conventional or non-OA journals do charge author-side fees. At the same time OA journals fees are often paid by author-sponsors (employers or funders) or waived, not paid by authors out of pocket. Increasingly, a growing number of universities maintain funds to pay for fee-based open access publications (Suber, 2012). However, it is to be borne that all models can not fit well into each field. This is evident from the case of PubMed Central that those publishing models that work well in one field, such as high-energy physics, may not fit in other fields, such as biomedicine (Kling, Spector, and McKim, 2002). BioMed Central levies an article-processing charge to cover the cost of the publication process. Authors publishing with BioMed Central retain the copyright to their work, licensing it under the Creative Commons Attribution License which allows articles to be re-used and re-distributed without restriction, as long as the original work is correctly cited (BioMed Central, 2012). Thus, the publishers and authors both have wide choices to choose the best among available models.

Cost of Open Access versus print: the cost of creation, maintenance and development of digital services has in many cases been much higher than expected. Elsevier, for example, is believed to have spent £45 million on its [ScienceDirect](#) service over the past five years. However, subscription bases journal articles can be accessed only by those, who can afford to pay high subscriptions, but OA journals can be accessed by anyone, anytime free of charge, so their usage is likely to be higher than subscription based conventional journals.

Consideration for Developing Open Access Journals

The 1990s witnessed some growth in Internet connectivity, thus creating a conducive environment for electronic publishing and dissemination of research results. As noted earlier according to Directory of Open Access Journals (2012) currently there are 8,

370 OA journals published worldwide. This is an indication that academic and research institutions are fast moving towards OA publishing. Given the major concerns that academics, researchers, authors and journal editors raise against OA publishing, the question then is what factors need to be considered when making choices between online Open Access publishing and print publishing. Apart from the differences of electronic publishing versus print publishing, which include among others elimination of technical processes, speed of review and publishing, free dissemination of research results without charging readers access fees, David Solomon (2008) provides a guide to developing quality Open Access journals.

The table below provides a summary of factors that academics, researchers, authors, and journal editors need to consider when starting an Open Access journal. The same factors should guide authors and researchers in the choice of established Open Access journals to send their manuscripts or articles for publication.

Table 2: Open Access Journal Publishing Guide

Name & Scope Of Journal	Editorial Board	Peer Review Policy	Hosting and Data Systems	Hosting Server	Journal Management System	Back-Up & Archiving
Name and scope of journal defines the content of the journal	All scholarly journals should have an editorial board responsible for journal policies and peer review processes. Editorial board should consist of reputable members to ensure quality and attract grant funding.	Scholarly journals should be peer reviewed to ensure: ➤ Accurate and quality articles ➤ Credibility of scholarly work ➤ Constructive & timely feedback for better manuscript for publishing	Online journals should have consistent domain names that maintain integrity of uniform resource locations (URLs) to access electronic articles via Internet Protocol (IP) addresses.	There is a need for server software to support multiple domain names. Journal editors could use alternatives as follows: ➤ Journal belonging to department or faculty using space in one of university server ➤ Using institutional URL for journal if journal belong to institution. ➤ Finding suitable hosting company with adequate resources & software to register and maintain domain name.	There should be Journal Management System (JMS) software, e.g. Open Journal System (OJS), to manage the peer review process. The process includes: ➤ Keeping track of manuscript from submission to publication. ➤ Submission notification to editors to select and assign reviewers to review copies ➤ Reviewers feedback summarised for editors to respond to authors through JMS ➤ All clerical work is automated (distributing manuscripts, collecting, collating, contacting authors, monitoring progress) ➤ Managing revision process (copy-editing, formatting, accessing of material by readers)	There is need for adequate system for back-up and recovery of content of journals. Back-up may include: ➤ Uploading files of finished webpages to hosting computers ➤ Using external disc drives ➤ Regular back-ups of daily and back-up copies kept at multiple locations. Content of journal should be archived for indefinite access. Archiving solutions include: ➤ "lots of copies keeps staff safe" = LOCKSS to store digital content from the web based from journal request ➤ E-Print archive s for pre-prints or post-print publication for indefinite availability and access or dissemination. Examples include archives linked to indexes such as PubMed Central and Educational Resources Information Center

Source: Solomon (2008).

Discussion

From the ongoing debate it is apparent that Open Access publishing is already having a great impact and is likely to make even greater impact on online access to research and scientific discovery. Open access publications provide great benefits to the scientific community by making results of research immediately and freely available to all members of the society. Criticisms against OA publishing pointing to a lack of peer review process seem to be groundless. Peer review does not depend on the price or medium of a journal. Peer review of OA journals can be as rigorous as peer review of conventional journals. The same procedures and standards can be used or innovative ways of peer review can be used. However, removing access barriers and reforming peer review are two different issues. OA is compatible with every kind of peer review and doesn't presuppose any particular model (Suber, 2012).

Accordingly, the future of open access publishing is luminous. According to Lewis (2012) the Dean of the IUPUI University Library Open access (OA) is an alternative business model for the publication of scholarly journals. Lewis analysis suggests that Gold OA could account for 50% of the scholarly journal articles sometime between 2017 and 2021, and 90% of articles as soon as 2020 and more conservatively by 2025. Owing to all this, OA publishing should be considered superior to conventional publishing owing to the following:

- OA publishing supports the mission statement of all societies to disseminate knowledge and education more effectively than subscription based journal contents as OA audience are much larger than the subscription based publications (Worlock, 2004).
- Articles published immediately as open access on a journal web site have higher impact than self-archived or otherwise OA articles. The authors found strong evidence that, even in a journal that is widely available in research libraries, OA articles are more immediately recognized and cited by peers than non-OA articles published in the same journal.
- Open access publications have increased impact. There have been numerous studies showing an increase in impact by publishing in open access journals because of larger dissemination and increased accessibility” (University of Florida Libraries, 2012).
- OA journals are economically sustainable because the true costs of peer review, manuscript preparation, and OA dissemination are considerably lower than the subscription-based journals. There's more than enough money already committed to the journal-support system. Also gradually libraries will realize large savings from the conversion, cancellation, or demise of non-OA journals (Suber, 2012).

Conclusion

From the foregoing, it can be concluded that Open Access journals are not different from conventional subscription journals. In fact, Open Access publishing speeds up

the process of peer review and publication, enhances distribution of journals freely to all members of the public, enhances collaboration of research through sharing of research and research results, and therefore eliminates duplication of research. Open Access journals undergo the same peer-review and quality control as any other scholarly journal. Moreover, Open Access allows the maximum visibility, uptake and use of the published material (Hindawi Publishing Corporation, 2012b). Increasingly, many institutions and funding agencies now prefer open access publishing and there is no data to suggest article processing charges, or the fees paid by authors to publish in gold open access journals, have been detrimental to research funding or quality (Sage Publications, 2012).

Recommendation

Research works should be made available to scientists and the public as soon as they are finished – following an initial screen to ensure they are legitimate works of science (Eisel, 2012). In order to achieve this, authors are of the view that there should be more rigours efforts and change of mind-sets at all levels: authors, librarians, publishers, institutions, and, government levels to promote and advocate open access. The responsibility and accountability include:

Author: Authors should opt for open access publications.

Librarians: They need to play decisive role in comprehensive promotion and publicity about OA.

Publishers: Their roles are to minimise OA publishing maintenance fee to attract and encourage more OA publications.

Institutional level: At institutional level, Ritskes (2011) has succinctly and appropriately put forward the following suggestions:

- When coming up for tenure, Open Access publications should count for more than gated journal publications.
- When looking for a job, we should be privileging those who have published in Open Access for the way they have chosen to engage the public in a discussion, rather than just their colleagues.
- There should be a push to acknowledge those who mobilize their work beyond the academy, who seek knowledge as active and engaged rather than simply for 'knowledge's sake' (Ritskes, 2011).
- Scholars should be recognised for open access publications (Ritskes, 2011).
- All institutions should fully pay researchers' OA publishing fees to encourage them for it and recognise OA publications for reward, recognition and promotions (Jain & Nfila, 2011).

Government: To contribute to economic, social and national development, the role of Government includes:

- providing an OA policy framework at the national level for knowledge development, allowing freedom of access to information and OA publishing.

- funding more research projects in order to enable researchers to participate actively in the OA publishing and, consequently disseminate research results that lead to improvement of life within communities.
- reducing the cost of ICTs to make OA more approachable; improving internet connectivity and telecommunication infrastructure to realize the real purpose of OA, and,
- subsidising OA publishers/institutions for producing freely available information.

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Trends of Specialisation in Mass Communication Education: *Implications for Journalism Practice In Nigeria.*

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ABSTRACT

This research examined the trends of specialisation among students who are enrolled for mass communication studies in selected Nigerian tertiary institutions. The study was framed out of the observation that students of mass communication are increasingly disinterested in journalism aspects of mass communication. The main objective was to provide empirical evidence on the specialisation interests of these students during their mass communication training programmes as well as the impact of their choices on and the in mass communication training and its impact on the profile of practitioners of journalism in Nigeria. Through the survey method, stratified and purposive sampling procedure was adopted to gather data from two hundred and six respondents from three universities, a federal polytechnic and a college offering mass communication as a discipline. Data collected were analysed using percentage and frequency. The result indicates that majority of students prefer public relations, advertising or broadcasting rather than journalism as a field of specialisation. Based on this finding, it was concluded that only few graduates of mass communication are likely to take up journalism practice in future, thus diminishing the hope of injecting professionally trained persons into the practice of journalism in Nigeria.

Key Words: Specialisation, Journalism Training, Broadcasting, Public Relations, Advertising, Gender.

Introduction

The idea of specialisation in the field of mass communication is inevitable if we consider the multi-disciplinary nature of the phenomenon. Mass communication which is made possible by the presence of a medium capable of disseminating the same message to a large heterogeneous audience dispersed in time and space; is a discipline that bears its influence on many fields. In virtually all the departments in the universities and polytechnics offering the course; the curriculum content is designed to provide training in journalism, public relations/advertising, and broadcasting. Before the advent of mass communication as a course of study in Nigerian universities, each of the fields was studied independently as shown in the literature review section of this paper. Even after Mass Communication was introduced, the first set of graduates in the 70s and early 80s were given general

training and recruited into any of the fields. Thereafter, the training orientation was reorganised to provide for specialisation in print journalism, broadcasting and public relations and advertising.

In the course of career building, both as students and lecturers of mass communication, the present researchers have observed that students preferred to enrol in broadcasting and public relations/ advertising sequence than the print sequence which is the nomenclature of courses that give specialised training for would be journalists. Further interaction with graduates of mass communication indicates lack of interest in seeking employment in newspaper or magazines houses. Would this result in lack of professionally trained persons in the practice of journalism in Nigeria; especially in the light of the observations that led the Nigeria Union of Journalists to insist that whoever wants to practice journalism in Nigeria must possess at least a diploma in mass communication/ journalism from recognised institution? This had been done in the hope that those with professional training would take over from the present practitioners' profile dominated by people from fields other than mass communication/journalism.

Available literatures on mass communication education focus on the appropriateness of locating mass communication in either Arts or Social Sciences. (See salawu2009& Mojaye 2009). Akinfeleye (2008) also documents the inadequate personnel and equipment in the mass communication training in Nigeria. There is not yet any study that examines the implication of the trend of specialisation among students of mass communication on the practice of journalism in Nigeria. This study examines direct factors that determine the choice of area of specialisation among students of mass communication. The study equally is also aimed at quantitatively documenting the interest of students in pursuing journalism as a career later in life. Specifically, the questions of interest to this study are:

1. What is the trend of specialisation in the sequences of mass communication among the selected institutions/departments of mass communication?
2. What is the trend in the choice of specialisation among students enrolled in mass communication in the selected institutions/departments of mass communication?
3. What is the relative gender dimension to specialisation in mass communication among students in the selected institutions/department?
4. Is there a difference between respondents' choice of career in any of the fields of mass communication at the points of entrance and at the points of graduation?
5. What is the comparative number of students who are likely to pursue journalism as a career as compared to Public Relations/Advertising and/or broadcasting?

Objective of the study

Based on the sociological and empirical need of this study, it attempts to analyse the trend of specialisation among students of mass communication in the principal areas of public relations/advertising, broadcasting and print. It also ascertains if there is significant gender dimension to specialisation in mass communication. The study is also interested in the indication of interest in journalism as a career among students. Specifically, the study attempt to achieve the following objectives:

1. Determine the relative trend of specialisation in the sequences of mass communication among the selected institutions/departments of mass communication
2. Examine the gender dimension to specialisation in mass communication among students in the selected institutions/department
3. Identify the number of students who are likely to pursue journalism as a career as compared to Public Relations/Advertising and/or broadcasting.

Literature Review

Specialisation in Mass Communication

Specialisation is associated with Adam Smith's classical work 'Wealth of Nation' (Ceapraz 2008) in which he expounded the concept of the division of labour. In the academic discipline, specialisation applies to the practice of focusing on a sub set of a discipline. The concept of specialisation allows persons to concentrate their skills on tasks at which they are most skilled. In the context of mass communication training, specialisation is the categorisation of courses into print journalism, broadcasting, public relations and advertising by allowing students to focus their intellectual energies and learning plans to acquiring skills in any areas of interest in the mass communication rubric. From theoretical perspectives, Specialisation optimises the endowments inherent in individuals.

Gender and Mass Communication

The literature on gender in the context of journalism and mass communication rarely considers the issue of professionalism. The focus understandably is to key in into the debate on gender equity and level of participation of women in journalism. For instance, Ikem (1996) did an extensive review of the participation of women in journalism in Nigeria and concluded that women journalists are faced with certain challenges. These challenges are exemplified by the low visibility of women in journalism and through sex-identity discrimination in favour of male counterpart in both role assignment and social recognition/acceptance. Okunna (2004) re-echoed the observation of Ikem and noted further that this low participation of women in media has resulted in the marginalisation of women in communication generally. According to her, "an analysis of the news content of five national newspapers and four newsmagazines indicates that women are still very invisible in the country's news media" The International Federation of Journalist (iFJ), took the a leap higher than the concern about quantity representation to the level of equity and quality of participation of women in journalism and mass communication media generally. The iFJ survey examined the following:

Women in Journalism

Women in Union

Equal Pay for Equal work

Portrayal of women in Media

The survey covered journalists across Asia pacific, Europe, America, and Africa. The conclusion of IFJ was that: Today, women can be found in all newsrooms. They work in print, broadcasting and on-line media; they cover every issue from education to war and their numbers in journalism continue to rise. As more and more women gain economic independence, they are a group to reckon with for advertisers and media

owners. And even where individual women are not in a position to "cast their vote at the newsstand" women media associations demand better coverage on behalf of women. Media owners disregard women's concerns at their peril. But the IFJ survey shows that there is no room for complacency. Nor is it right to think that the struggle for equality in journalism has been won. Many issues remain unresolved and as long as women are still impeded by discrimination over the top jobs, or have less access to training, or continue to be forced into impossible choices between career and family, journalists' unions must keep women's rights at the top of their agenda.

Mass Communication Training in Nigeria

The training of journalists in Nigeria trailed the practice of journalism by almost a century; even then the first of sets of training organised within Nigeria were on short term in-house or vacation courses. Journalism practice in Nigeria is historically marked with the establishment of *Iwe Iroyin* in 1859 (Fred Omu, 1996), while the training of journalists, according to Akinfeleye (1987) started in 1954, through non-formal arrangement. This arrangement subsists up till the 1960s in various forms and by different interested organisations. In 1954, a "Vacation Course in Journalism" was organised by the colonial rulers. It was followed by a 1959 United State Information Service (USIS), sponsored "Journalism Travelling workshop" and a "Nigerian Journalism Course" by International Federation of Journalists in 1960. (Akinfeleye, 1987; in Uyo and Dare 1996, 2008). The seemingly stillness in the perception for formal training of local journalists was attributed to the historical colonial experience under the British rulers; and the concurrent use of the press by the nationalists to fight for emancipation from the colonial subjugation. The portrait of the earlier journalists in Nigeria was captured vividly this way by the erudite scholar of press history in Nigeria; Professor Fred Omu. According to him; *The early newspaperman with few exceptions did not have any formal professional training nor were they educated much beyond the secondary school level. However they exuded self-confidence as they were men of stature active in politics and social life. They were erudite, talented, resourceful and enterprising(Omu, 1996).*

The concern of these men described by Omu as 'erudite and talented' was to use the media for educating the populace to acquire knowledge 'as to form the basis of a strong public opinion which the colonial government could not ignore'. Unlike other professions such as law, medicine and the likes; the British colonial government, taking a clue from their home government; did not regard journalism or any of the fields of communication that were later to be consolidated into Mass Communication discipline; as a profession requiring any formal training. As a matter of fact; formal training for journalism in Britain, relative to other Western nations particularly the United States of America USA; is still a recent phenomenon. Low literacy level is yet another contributing factor to the standard of journalistic education. 'It has become a truism that low literacy rate can contribute to a low degree of journalism education and also to low standard of journalistic performance'(Akinfeleye 2008, p.98).

In the field of broadcasting; the situation is akin to what obtained in the print media. In spite of the fact that the use of television for public enlightenment and education was vaunted as the *prima facie* motivation for establishing the first television station by the government of the Western region. In 1959, there was no arrangement or collaboration with existing institution for the formal training of broadcasters locally.

Rather recruitment into broadcasting was from the core civil service of people with basic skills in writing, not necessarily in the arts of broadcast production.

Radio broadcasting which preceded television about three decades earlier (the re-diffusion arrangement in 1932) was established to serve the British colonialist in the tasks of disseminating information to the populace. An observer pointedly noted that: *The British established the Empire Service, designed to serve their colonies and dominion in Canada, Australia, India, and Anglophone Africa. For their dominion imperialistic motivation, the British colonial master consciously and conscientiously promoted the use of African vernaculars. The objective was to build enough African audience. This would boost their propaganda programmes (Bourgalt, 1994, p 69).*

It was not until 1956, that 'a two year in-service training, (obviously conceived in the mentality of civil service training), was arranged for radio broadcasters in the news department of the then Nigerian Broadcasting Corporation (NBC) now the Federal Radio Corporation of Nigeria (FRCN). In 1957, the FRCN in-service training programme was developed into a training school for the training of staff members of the Corporation on regular basis. The school equally admits, on regular basis, media staff from other broadcasting organisations across the country. The training offered by the school covers all areas of broadcasting including journalism, engineering, production and marketing. Similarly, the Nigerian Television Authority has a television college located in Rayfield, Jos, Nigeria. The college trains staff and non-staff across the nation in all areas of television broadcasting. It has just been upgraded to a degree awarding institution and affiliated to Ahmadu Bello University, Zaria in Kaduna State.

The incorporation of the fields of communication such as Public Relations, Advertising and Broadcasting, journalism as an academic field of studies however happened in the 60s with the establishments of Department of Mass Communication at the University of Nsukka in 1962, and the University of Lagos 1967. In a study on Mass communication/ Communication Studies in Nigeria, Mojaye, (2009) said that out of 71 universities in Nigeria, 43 of them offer mass communication/ communication studies. As at the time of this study in November 2010, more universities offering mass communication as a course of study have been established. Amongst them is the Kwara State University, Malete which is included in this study. Apparently pressed by the inability of existing universities to cope with high admission demand on yearly basis, the federal government announced the establishment of six new universities to be located in states where there was no Federal Government owned university. Many of them when they come on board will add to the number of institutions offering mass communication course. At the last count not less than 13 Polytechnics and monotechnic offer courses in mass communication. Prominent among the monotechnic offering journalism course in Nigeria is the Nigerian Institute of Journalism (NIJ) which was founded in 1971 in Lagos; with tripartite funding by International Press Institute (IPI), the Nigerian Newspaper Proprietors' Association (NPAN) and the Nigerian Guild of Editors (NGE), until 1975 when the (IPI) withdrew.(see Akinfeleye ,2008 p 103).

ISSUES IN MASS COMMUNICATION EDUCATION IN NIGERIA

Since the time universities in Nigeria have started offering mass communication as a course of study a number of issues have emerged. Among these issues are:

Academic/disciplinary location of mass communication (Arts, social sciences/ICT/management)

Training-Catered Issues (facilities, human resources, student population)

Specialisation (print, broadcasting, advertising, public relations).

Academic/ disciplinary location (Arts/social sciences/ICT)

The pioneer school of journalism in Nigeria; the Jackson College of Journalism at the University of Nigeria Nsukka; was located in the Arts/ humanities faculties just as the graduates of the department of mass communication University of Lagos, which followed that of Nsukka in year of establishment; were awarded Bachelor of Arts Degree (B.A). The department of mass communication in the University of Lagos had since relocated to faculties of social sciences and now award Bachelor of Science (B.sc), Degree. Beyond mere nomenclature, location of the mass communication has been a subject of regulatory issues. Mojaye (2009) had noted that the National Universities Commission NUC, through its accreditation team; at least in an instance, advised a department found in the Faculty of Arts to relocate to the Faculty of Social Sciences.(see Mojaye, 2009 p 219). In fact some scholars are of the view that the location of the first college of journalism in a University, at Nsukka, in the Faculty of Arts was erroneously located (Nwosu, in Mojaye 2009).

Salawu (2009) however, dismissed such entanglement on the locational trajectory of mass communication as needless. He asserted that the indignant about the location of mass communication departments within universities in Nigeria is unnecessary. Rather than making an issue out of the location, he believes, we should be more anxious about the contents of the mass communication curricula. He anchored his argument on the assertion of McQuail (2005) ‘that the study of communication has to be interdisciplinary’; and in the light of Severin and Tankard’s (1992) elaboration on the nature of mass communication: *It is a skill in the sense that it involves certain fundamental learnable techniques such as focusing a television camera, operating a tape recorder or taking notes during an interview. It is an art in the sense that it involves creative challenges such as writing a script for a television programme, developing an aesthetic layout for a magazine ad or coming up with a catchy lead for a news story. It is a science in the sense that there are certain principles involved in how communication works that can be verified and used to make things work better* (Severin and Tankard, 1992: 1).

Perhaps the foregoing positions have not taken cognisance of another dimension to the vocational ‘furore’ of Mass Communication in the universities. The trend now is to group mass communication with Information and Communication Technology related courses. This is the present situation in University of Ilorin, Kwara State University, The Federal Polytechnic, Offa and Osun State Polytechnic Ire. This trend is still like a fad will soon catch up with other tertiary institutions. This innocuous trend is already exerting pressure on the arts/social sciences orientation of mass communication. Given the course system in the university, based on liberal philosophy requiring students to take some courses in the faculty, the curriculum of

mass communication is being gradually wielded of social sciences courses in other to accommodate faculty courses and avoid burdening students with too much workload. The implication is that graduates of mass communication may be high in ICT skills and be less in social sciences understanding. Rather than dismiss the issues as needless, it would seem imperative to pay more attention to it in view of the trend as noted here. Some senior academic have queried the insistence of mass communication departments not to admit candidates from pure science background since it is in the same faculty with computer science, Information and Communication Science and Telecommunications.

A discipline that is so fluid to the point of no fixed location within the rubric of academic discipline must of necessity; suffer identity crisis.

Training Environment-Centred Issues (facilities, human resources, student population)

Akinfeleye (1987, 2008) listed at least six challenges or what he called major barriers to effective media (mass communication) education in Nigeria. (1) Inadequate teaching staff (2) Accommodation (3) Textbooks (4) Large classes (5) Out dated infrastructures and (6) Poor salary. Some of these challenges are being mitigated, largely, as consequences of continuous engagement of government by the Academic Staff Union of Universities (ASUU) in Nigeria. However, some of them are also becoming acute if not intractable. An example is inadequate teaching staff. Apart from having few qualified academic staff teaching undergraduate courses (which leads to excess work load) few of the over forty universities offering mass communication in the country have National Universities commission's full accreditation approval to run PhD programme.

The provision of mass communication education in Nigeria tertiary institutions can be grouped into two areas-the department approach and the School/faculty approach. The outlook of this approaches are as follows.

The **department approach** treats the sub-set or sequences under mass communication as a field of specialisation after training in the basic courses such as the arts of news writing, theoretical orientation, introductory aspects of broadcasting, public relations and advertising, and research skills. After this basic exposure, students are advised or divided into 3 areas of specialisation; Broadcasting, Print journalism and Public relations/ Advertising. This approach was pioneered by the University of Lagos and seemed to be preferred approach among most of the Universities across the country. It is important to note however, that students, at this stage, also offer other general and required/ compulsory mass communication courses (such as development communication, mass media management, critical issues in mass communication etc.) asides courses from their individual areas of specialisation.

In the **School/ institute/faculty Approach** students are admitted into a four year programme to read courses in the sequences or fields of specialisation. Each of these sequences forms a department of print media, broadcast media, public relations and advertising. Some of the many private universities springing up in Nigeria are attempting to follow this pattern. The issue with the school approach to the study of mass communication as noted by Salawu (2009) however is that many of the schools using this approach 'lack the requisite manpower, infrastructure and facilities' to

realise this ambition. Aside this challenge, the **school/institute approach** offers a viable route to solve the problem of identity and can resolve curriculum design issues for mass communication studies. An integrated curriculum for all fields of mass communication can be fashioned out. In short mass communication deserves a faculty status just as law enjoys currently in the Nigeria university system.

Research Methodology

Survey method was employed to carry out this study. The study population comprised Students of Mass communication from five tertiary institutions offering mass communication course in Kwara State. These institutions are University of Ilorin, Kwara State University, Al-Hikmah University, The Federal Polytechnic Offa and College of Arabic and Islamic Legal Studies. A preliminary survey was conducted to determine the population of mass communication students in each of the institutions under study. Findings revealed the following as the total of student population in each of the institutions:

University of Ilorin:	75
Kwara State University:	45
Al-Hikmah:	70
The Federal Polytechnic Offa:	447
College of Arabic & Islamic Legal Studies:	356

The respondents were firstly selected through stratified sampling method to ensure fair representation of students across all levels in the mass communication departments of the selected institutions. Thereafter, Purposive sampling procedure was adopted to ensure equal representation of all parameters. Dominick (1993) quoted in Alao (2010), provided the motivation as well as the justification for the recourse to purposive sampling when he noted that purposive sampling methods ‘enables the researcher(s) to select subjects on the basis of quality’

The study sample consists of 74 students selected from Federal Polytechnic, Offa and College of Arabic and Islamic Legal Studies, In addition, a total of 132 students were selected from the three universities. Thus, a total of 206 Mass Communication Students (comprising both male and female and drawn from all levels of their degree/national diploma programme) constituted the sample for the study.

DATA PRESENTATION

The key findings of this study are presented as follows:

Table 1: Population Distribution of Mass Communication Students in the Selected Institutions

Institution	Population
UNILORIN	75
KWASU	45
AL-HIKMAH	70
OFFA POLY	447
CAILS	356
TOTAL	994

The total population of all mass communication students in the selected institutions was found to be 994. Out of these, students of the Federal Polytechnic Offa (Offa Poly) and College of Arabic and Islamic legal Studies (CAILS) are in the majority with the populations of 447 and 356 respectively. The University of Ilorin (UNILORIN) has 75 mass communication students while Al-Hikmah University has 70 and Kwara State University (KWASU) has the least population of 45.

Note: a total sample of 206 students was surveyed for the study and the institutions are categorised into two; university (comprising UNILORIN, KWASU and Al-Hikmah) and polytechnic (comprising OFFA POLY and CAILS)

Table 2: Population Distribution According to Institution and Gender

Institution	Sex		Total %
	Male	Female	
Polytechnic	18 %	62%	100% (n=74)
University	32%	68%	100% (n=132)
Total	33%	67%	100% (n=206)

Table 2 indicates that female students offering mass communication in both categories of institutions are generally more than their male counterparts. While the female mass communication students in the polytechnic constitute 62% of the total population of 74 in that category of institution, the male students are only 18%. At the university level however, the disparity in gender is somewhat reduced with the female amounting to 68% while the male make up 32% of a total of 206 students. However, it can still be inferred that female mass communication students are more than the male.

Table 3: Choice of Specialisation According to Gender

Sex	Sequence			Total%
	PRAD PRINT		B'CAST	
Male	38%	51%	11%	100% (n=69)
Female	31%	62%	7%	100 % (n=136)
Total	33%	58%	9%	100% (n=206)

Of all 206 mass communication student who participated in this study, the Public Relations and Advertising sequence has 38% of the male and 31% of female; The Broadcasting sequence has 51% of the male and 62% of the female; while 11% of the male and 7% of the female fall in the Print sequence. The implication from this table is that more male students are enrolled in the broadcast area of specialisation, followed by the Public Relations and Advertising and then the Print sequence. The same goes for the female students. Across all sequences however, the female students are generally more than their male counterparts.

Table 4: Preferred Choice of Sequence at Point of Entrance by Students According to Institution

Institution	Preferred Sequence at Point of Entrance			Total%
	PRAD PRINT		B'CAST	
Polytechnic	30%	60%	10%	100%(n=74)
University	36%	56%	8%	100%(n=132)
Total	33%	58%	9%	100%(n=206)

At the start of their diploma programmes, 30% of the Mass Communication students in the Polytechnic had preference for the Public Relations and Advertising Sequence, 60% preferred to specialise in Broadcasting; while 10% wanted to go for the Print sequence. The trend at the University is similar. While 36% preferred to study Public Relations and Advertising, 56% was interested in Broadcasting and only 9% preferred the Print sequence. This shows that the popularity of the Public Relations and Advertising sequence as well as Broadcasting sequence; and the low interest in the Print area of specialisation had already been in the mind of the students even before they were exposed to the fundamentals of each area of specialisation. It is interesting to note, from this table 5, that the preferred choice of specialisation at entry point is somewhat consistent with the current trend of specialisation in the sequences when compared with data in previous tables.

Table 5: Preferred Choice of career by students after graduation according to institution

Institution	Choice of career			Total%
	PRAD PRINT		B'CAST	
Polytechnic	23%	66%	11%	100%(n=74)
University	39%	52%	9%	100%(n=132)
Total	33%	57%	10%	100%(n=206)

Stating the preferred choice of career after graduation from the field of mass communication, 23% of students of the Polytechnic indicated interest in Public Relations and Advertising, 66% went for Broadcasting and 11% chose Print. For students of the university, 39% prefer the Public Relations and Advertising career; 52% are interested in Broadcasting and 9% prefer Print. This table shows that there is an increase (66%) of interest to pursue broadcasting after graduation among polytechnic/college students when compared to their preference at point of entrance which was (60%), as shown in table 5. While interest in print remains constant both at the point of entrance and at graduation for university and polytechnic students, (9% for university, and 11% for polytechnic), there is a slight drop in broadcasting among university students (52% after graduation from 56% at the entrance point). Interest in pursuing public relations and advertising remains consistent around 30%.

Table 6: Preferred area of specialization after graduation according to gender

Sex	Career Choice			Total%
	PRAD PRINT		B'CAST	
Male	35%	54%	11%	100%(n=69)
Female	32%	59%	9%	100%(n=137)
Total	33%	57%	10%	100%(n=206)

35% of male students who participated in this study prefer to take up their career in Public Relations and Advertising, 54% in Broadcasting and 11% in Print. On their part, 32% of the female prefer Public Relations and Advertising; 59% prefer Broadcasting and 9% prefer Print journalism. This table shows that from gender perspectives, there are few variations between the students' current choice of specialisation and career choice after graduation. When compared with table 3, it is observed that the interest in pursuance of broadcasting, public relations and advertising remains consistently higher than the print journalism which continued its low attraction among the students.

DISCUSSION OF FINDINGS

Findings from this study reveal that mass communication studies in Nigeria at present indeed provide formal training of students for professionalism in three broad areas of the field, namely; Public relations and Advertising/Integrated Marketing, Broadcasting and Print journalism. This is unlike in the early days of journalism training in the country which according to scholars was characterised by such features as non-formal training arrangement, short term training sessions/duration and general training without specific areas of specialisation (Omu, 1996; Akinfeleye, 1987).

From gender perspectives, the study shows that there are more female than male studying mass communication. The relative gender dimension to specialisation in mass communication among students in the selected institutions/department shows that there are more female than male in the both public relations/advertising and broadcasting but more male in the print (newspaper/magazine journalism). The obvious implication of this on journalism practice is the marginalisation of women and this may further deepen the marginalisation of women issues in media public discourse. Earlier studies on the female gender bias of journalism practice in Nigeria such as Ikem (1994) and Okuuna (2004) had documented this trend. However, the higher number of female students in general and in broadcasting as well as public relations and advertising in particular goes to show that there is an improved opportunity for participation of women in the media. This is an indication that there are likely to be more women in the public relations and advertising and broadcasting careers.

Implications for Journalism Practice in Nigeria

Data from this study show an obviously low level of interest in print journalism among Nigerian students. Before the advent of formal training in Mass Communication, the media and print journalism has been dominated by practitioners from other fields of endeavour. With the introduction of mass communication as a field of study in our Nigerian higher institutions, the expectation is that students of the

course would graduate to occupy suitable positions in the field. In fact, as stated earlier, the Nigerian Union of Journalists had insisted that practitioners must hold a minimum of National diploma in Mass Communication or Journalism from a recognised institution.

However, majority of respondents in this study, drawn from Mass Communication Institutions in Kwara State of Nigeria, have their specialisation interest skewed towards broadcasting, public relations and advertising at the detriment of print journalism. According to them, reasons for their preference include their belief that broadcasting and PRAD are more glamorous, easier to pass and lucrative than print journalism. Only 10% are currently studying print journalism as their specialised field and the only the same 10% are interested in taking up their career in this area. The obvious implication of this is that there would still be dearth of sufficiently and professionally trained print journalists in the country. The field would either have very few practitioners or still be dominated by either people from other fields entirely or those trained in other areas of mass communication who could not get employed into their own specialized fields.

In respect of those who are specialised in print journalism however, this offers them a better opportunity of becoming professional Journalists with adequate training from the scratch thus adding more value to Nigerian Journalism practice.

CONCLUSION

The study was conducted from the view point that the hope of injecting professionally trained mass communication graduates into the practice of journalism in Nigeria would be achieved if the students are disposed to it from the training level. Since the preponderance of candidates who aspire to read mass communication go through the polytechnic and the university, the study explored the empirical situation of sequence preference and career choice among the students.

From the data available in this study we can conclude that the relative trend of specialisation in the sequences of mass communication among students in the selected institutions/departments of mass communication is to divide the students into public relations and advertising, commonly referred to as PRAD; the broadcasting area incorporating some courses in film and video productions and the print sequences which contain the courses that have direct bearing on newspaper/magazine journalism.

The study equally concludes that the relative number of students who are likely to pursue journalism as a career as compared to public relations/advertising and/or broadcasting are abysmally low. With ten percent of the sampled respondents specialising in the print sequence while in school and the same number indicating willingness to pursue print(newspaper/magazine journalism) as career, it is save to conclude that(subject to replication across institutions) there **would** be dearth of professionally trained mass communication graduates of tertiary institution venturing in to journalism.

RECOMMENDATION

Considering the impact of the first set of graduates in raising the level of journalism practice in Nigeria in the 70s and 80s, it should worry the minds, the present level of disinterestedness in journalism among mass communication students. The data contained in this study, even though limited in scope in its spatial coverage, it is enough discouraging signal in the hope of professionalism in journalism practice in Nigeria.

It is therefore recommended that all stakeholders should collaborate to fashion out a way of motivating students to pick interest in journalism without necessarily jeopardising others specialisation's interest.

It is also imperative to commission a special project on the issues with a view to dig into the factors responsible for the trend in specialisation in mass communication training which is skewed currently against journalism.

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The Information Behaviour of Weibo Re-tweeters in a marketing context: An Exploratory study

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ABSTRACT

Weibo (the “Chinese Twitter”) has huge potential for spreading information, based on its Twitter-like penetration of the Chinese microblogging market. As re-tweeting can play a snowballing role in dissemination of information, it can be used for a range of purposes, including marketing. This study explores factors that affect Weibo participants’ probability to re-tweet tweets from commercial organizations. It examines, from the re-tweeters’ perspectives, the characteristics of tweets that have a higher probability of being re-tweeted. Recommendations to increase the likelihood of a tweet being re-tweeted to enhance information flows for the beneficiary organization include: keeping tweets short and concise; inlay tweets with suitable pictures or videos; post new information in tweets; make tweets positively emotionally resonant; and engage opinion leaders to become potential re-tweeters.

Keywords: Microblogging, Weibo, Information Behaviour, Information Dissemination, Re-tweeting

Introduction

Microblogging has become an increasingly important communication tool worldwide. In February, 2013, Weibo, the “Chinese Twitter” passed 500 million subscribers, nearly 50% of whom are daily users (Wee, 2013). Twitter had already reached this mark in June 2012 (Lunden, 2012). The emergence of microblogging has a range of potential social and commercial consequences for individuals and organisations. By establishing a free account on a microblogging platform, an organization can advertise, establish public relations and most importantly, communicate with its customers/clients, as marketing power has migrated significantly towards consumers (Pires, Stanton, & Rita, 2006). Microblogging is not confined to commercial organisations: for example Chinese governmental agencies also use microblogs extensively to communicate (Zhang, Wu, & Zhang, 2011).

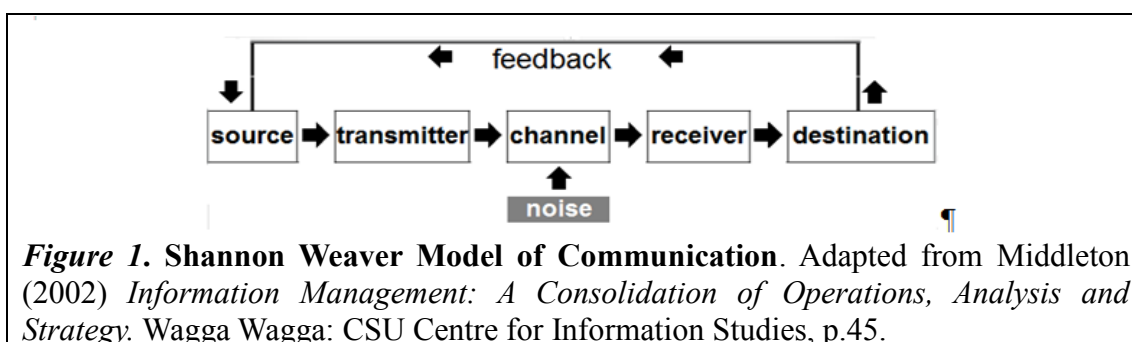
Microblogging marketing involves wide and fast information dissemination through networks of personal relationships in a “viral” mode where re-tweeting occurs (Watts & Peretti, 2007). Re-tweeting allows a user to re-post what he/she has received from others. It is a cheap and accessible way to accelerate the dissemination of information and reach a growing population of potential recipients in the microblogging environment. As re-tweeting has emerged as significant channel of communication, it

is worthwhile to explore the behaviour of microblog re-tweeters to increase re-tweeting and utilize the potential power of microblogging (Pires, et al., 2006; Yazdanifard, Obeidy, Yusoff, & Babaei, 2011).

Previous studies have investigated re-tweeting behaviour (Boyd, Golder, & Lotan, 2010; Macskassy & Michelson, 2011; Nagarjan, Purohit, & Sheth, 2010). Most of these studies focused on Twitter as the sole exemplar to discuss, analyse and generate frameworks and models, without examining the applicability to other microblogging platforms. Few studies specifically focus on the *information behaviour* of re-tweeters in terms of marketing on microblogging platforms.

Theoretical Framework

The Shannon-Weaver model of communication is adopted as the framework to illustrate the information flow of microblogging based on re-tweeting, and to highlight ways that noise can be reduced during the communication process between microbloggers.



Given that *source* is the content of a post tweeted by an organization and *receiver/destination* is the group of potential consumers/clients that the organization wishes to reach, if the post is not re-tweeted, *receivers* are limited to direct subscribers of that organization's account. However, once the re-tweeting *channel* is open, the range of potential *receivers* will be enlarged as information permeates through interpersonal networks of re-tweeters and flows to new *receivers*, unknown yet potentially valuable to the organization.

Noise may be reduced as the microblog serves as a natural screening mechanism segmenting people into different groups by common characteristics, e.g. interests and purchasing power. In the case of a library, segmenting could be based on common reading or research interests. Organizations disseminate directly to their microblog subscribers who are interested in their products and will be more likely to be attracted to them compared to general audiences that are reached by other marketing channels. Interpersonal networks organized by microblogging sites assist organizations to convince people to accept their information. Re-tweeting behaviour is worthy of investigation as a re-tweeter decides the *destination* and the range of the information diffusion. Re-tweeters' interpersonal networks may overlap the interested audience of organizations to a certain extent in some cases, but re-tweeters can also broaden the channel of information diffusion in others.

Regarding information dissemination, apart from functions that are specially designed

to embrace the customs and culture of Chinese users, Weibo differs from Twitter in one major factor. In Twitter, every piece of information, original tweet, reply or re-tweet, from a certain user becomes an *individual* tweet listed in that user's timeline. In contrast, displaying comments in Weibo is optional, so that a comment has to be re-tweeted to be shown on the commenter/re-tweeter's timeline. This difference between Weibo and Twitter indicates the gap between previous studies on Twitter and their application to Weibo.

Research Questions

This research analyzes the information flow involved in re-tweeting, explores the information behaviour of re-tweeters. This paper will address the following questions:

1. Why do Weibo users re-tweet others' tweets?
2. What are the characteristics of tweets that are apt to be re-tweeted?

Literature Review

As there is interdisciplinary knowledge involved in this research, particularly the marketing field, the scope of literature review covers marketing, microblogging and re-tweeting. Although these papers do not directly address the authors' precise research objectives, they provide valuable background for this study

Microblogging Marketing

Microblogging is a representative medium of rapid information dissemination, and when used properly can be a versatile tool for integrated marketing communications (Schultz, 1992). Sina Weibo is often considered to be the Chinese equivalent of the western world's Twitter. Launched in August 2009 by Sina Corporation, China's biggest web portal, Sina Weibo soon became the dominant microblogging platform in China. ("Weibo" is pinyin for "微博", meaning microblog in Chinese). At the Fourth International Global Mobile Internet Conference in May 2012, Sina reported that the number of Weibo users had reached 300 million, 9% of which are daily users and over 100 million tweets are produced on average per day (SINA, 2012). By February 2013 the 500 million threshold had been reached (Wee, 2013). According to the *Cooperation Weibo White Paper* released by Sina and CIC, one of the leading social business intelligence providers, by the end of February 2012, a total of 130,565 organizations have registered Weibo accounts (SINA & CIC, 2012). Among these, 207 were from top 500 local companies in China; every company account averages over 5,000 followers; while Weibo users follow four company accounts on average. Over 56% of Weibo users follow at least one company account: 60% of them purchase merchandise from them. Statistical trends predict growth for Weibo marketing and also indicate the importance of managing Weibo marketing for organizations.

Information Behaviour of Re-tweeters

Laudon & Traver (2003) suggest that most online buyers focus on web browsers as they target specific items to buy. However, the intention to purchase could be triggered or even built by effective microblogging marketing. It is widely acknowledged that information needs form under the influence of many factors, such as demographic and psychological factors. For example, Johnson's (1997) model

refers to motivators as antecedent factors, while Wilson's (1999) second model regards them as intervening variables (Case, 2007). Studies on the motivation of information seeking help explain why tweeters re-tweet and also clarify that re-tweeting motivation could have different motives.

Boyd, Golder, & Lotan. (2010) argue that re-tweeting creates conversations among re-tweeters. This bond tightens the networks initially created by demographic factors for microbloggers, and endows re-tweeting with more meaning than "plain" information transfer. Based on Laudon & Traver's (2003) perspective, microbloggers' information seeking could be strongly influenced by the *act* of re-tweeting and the interpersonal networks attached to it. For example, in Johnson's model (1997), under the category of antecedent factors, the direct experience of an individual contributes to his/her information seeking, an underlying concept that could be related to the social network of that individual (Case, 2007). Re-tweeters will be influenced by their networks when they seek information. Wilson's (1999) list of activating mechanisms includes psychological predispositions and characteristics of sources (Case, 2007), in the re-tweeting case, the tweet source and tweet structure.

A number of authors have suggested reasons why tweeters' re-tweet. Comm (2010) noted that the *tweet characteristic* is important; tweets containing news and instructional content are more attractive than those containing entertainment and opinions. Yu, Asur, & Huberman (2011) report that Weibo users tend to share jokes, images and videos and that re-tweeting is generated due to media content. Berger and Milkman (2012) believe that some types of online content have more diffusivity than others due to more effective emotional arousal, e.g. when information evokes high-arousal positive (awe) or negative (anger or anxiety) emotions. Emotional resonance consists of communication between organizations and consumers that is conducive to developing loyal consumers.

Ho and Dempsey (2010) suggest that individuals like *individuating* themselves by sharing opinions with others. People appreciate unique opinions, take pleasure in disseminating them and tend to expose themselves to ideas that are in accordance with their interest, needs, and existing attitudes (Rogers, 1995). This accounts for the operation of interpersonal networks on microblogging service providers as well as the influence of opinion leaders.

Methodology

This paper applies a mixed methods approach. First, qualitative approaches are adopted to avoid losing the complexity and context of data when interdisciplinary knowledge is required to make sense of complex situations (Morse & Richards, 2007). In addition, this research attaches importance to participants' real-life experiences, so qualitative approaches are applied as they are more suitable to obtain uncontrolled observation (Blaxter, Hughes, & Tight, 2001). Qualitative inquiry strategies include literature scanning, observation and case study. Case studies include questionnaire-based interviews; therefore quantitative data analysis was also used. A questionnaire designed to elicit Weibo users' attitude towards the features of a tweet was administered to subjects.

Observation

Being a Weibo user herself, one of the authors could observe re-tweeting behavior as a participant during this research. However, the author separated her experience from the participants; that is, the author's re-tweet experience was excluded as data, in order to remain objective when observing (Morse & Richards, 2007). Observation was used to record statistics during the research period, and record changes and unpredictable examples of re-tweeting practice on Weibo. The scope of observation was limited to the public domain, such as functional differences between Twitter and Weibo.

Questionnaire/Case Study

To supplement the literature review and observation, subjects completed a semi-structured interview/questionnaire to gather structured information to test the *a priori* theory and hypotheses, and attitudes of participants (Moore, 2000). An online questionnaire was prepared to collect data from June 2nd to July 2nd 2012. Data analysis was partially processed by the online survey software www.sojump.com. A pilot study was implemented before the final questionnaire was put online in order to verify the efficacy of the questionnaire. Analysis of the questionnaire led to some participants being invited for a further interview. Interviewees were *not* limited to participants of the questionnaire. Interviewee inclusion criteria focused on Weibo users who have experience in winning rewards for re-tweeting and a one-person business owner who has used Weibo as a marketing channel. Informed consent of participants of questionnaire/interview was collected in accordance with the research ethics policy of the University of Hong Kong.

Sampling

Since Sina Weibo is currently the dominant Chinese microblogging platform, the population of this research was the complete set of Weibo users who have been involved in Weibo-re-tweeting. Initial stratification was applied as participants were required to identify whether they had participated in re-tweeting. The sample size for questionnaire was set to 100 which is believed to be sufficient to test an *a priori* hypothesis, where an interview is designed to handle problems encountered during completion of the questionnaire. Since one of the authors is a Weibo user, the participants for the questionnaire were recruited mainly from the followers of this author. Snowball sampling was also adopted.

Findings & Discussion

Demographic Information

A total of 111 participants completed the questionnaire. As shown in Table 1, 72 were females (64.9%) and 39 were males (35.1%); nearly 95% were among the 18-30 age group; 97.3% hold a college degree or above; 61.3% are from Guangdong Province (PR China); plus three additional locations: Hong Kong; Jiangsu Province (PR China); and overseas (i.e. not Hong Kong or PR China). The results in Table 1 largely reflect findings listed in the joint white paper *Microblog Revolutionizing China's Social Business Development*, that most Weibo users are young, highly-educated and from comparatively economically-developed regions (SINA & CIC, 2011). They are independent thinkers, yet tend to be attracted by new ideas and fashion, and may possess significant consumption power. Re-tweeting can potentially be a major

information distribution method in Weibo (Yu, et al., 2011).

Additionally, five people joined the later interview: three operate customer to customer (C2C) businesses on taobao.com, a Chinese language online shopping site similar to eBay; and the other two were participants who have won rewards from re-tweeting.

Table 1: Educational Background of Participants

Educational Level	Total	Percentage
High School or College student	3	2.7
Undergraduate	67	60.4
Graduate or above	41	36.9
Total	111	100.0

Table 2 shows participants' proclivity to re-tweet. Regarding their re-tweeting behavior, 69.4% of participants re-tweet posts that they find interesting or feel obligated to inform others about, while 6.3% participants re-tweet without any specific reasons, differentiating them from the remaining 24.3% who seldom re-tweet.

Table 2- Frequency of Re-tweeting

How often do you re-tweet?	Total	Percentage
I seldom re-tweet	27	24.3
I only re-tweet something I find interesting or my duty to let people know	77	69.4
I re-tweet quite a lot	7	6.3
Total	111	100.0

Based on the results in Table 3, the majority (63.1 percent) of participants add their own comments to re-tweets while 29.7% choose not to do so. Only 7.2% edit/delete other users' comments attached to the original tweet. The majority of Weibo users retain other users' comments when re-tweeting. Such information behaviour is favourable for marketing as the information dissemination through the channel of comments is continual, i.e. without any deletion of earlier comments. The comments are likely to be perceived as valuable as they have been articulated by tweeters with similar socioeconomic status.

Table 3- Nature of Re-tweeting

How do you re-tweet?	Total	Percentage
Forward exactly what I've read, including other people's comments, to others without commenting	33	29.7
Forward what I've read, including other people's comments, with my comment	70	63.1
Forward what I've read with part of the content, e.g. other people's comments, amended without commenting	8	7.2
Total	111	100.0

Re-tweet Characteristics

Based on the data collected in Table 4, some important re-tweeting characteristics can be identified. Firstly, tweeters prefer short posts, and posts that interest them. Only 11.7% of participants will finish reading an entire 140-character or longer post, while others will either give up reading, or manage to read only some parts of the post unless it interests them.

Table 4- Willingness to Read an Entire Tweet

How would you read a 140-character or very long tweet (Not including the text in the picture)?	Total	Percentage
I'll read it thoroughly	13	11.7
I'll read part of it to see if I'm interested to finish all	95	85.6
I'll quit	3	2.7
Total	111	100.0

Table 5 demonstrates that pictures and inlaid video can effectively attract tweeters' attention and encourage re-tweeting (47.8%), but not when they are only provided as attached hyperlinks. This suggests that including vivid images in tweets has a positive correlation to re-tweeting behaviour. It should be noted that graphics and video can have a strong informational role as well as being attention grabbing. Similarly, news (59.5%), opinions (63.1%), and emotions (40.5) are also important. This is consistent with the subjects' demographic profile of the well-educated, urban dweller (see Table 1).

Table 5- Characteristics of Re-tweets

Which of the Following Tweets are more Worthwhile Re-tweeting? (Multiple Choices)	Total	Percentage
News (without hyperlink)	66	59.5
Entertainment, e.g. a gif or video	53	47.8
Advertisement (without hyperlink)	6	5.4
Tweet as a teaser with a hyperlink	9	8.1
Opinion or attitude	70	63.1
Description or emotional expression	45	40.5
Others	9	8.1
Total	258	

Concerning information type, tweets that are opinions, news and description/emotional expressions towards some given topic are likely to become more viral on Weibo than pure advertisements. Some clarification needs to be made here. Firstly, *pure advertisement* refers to a plain product description without decorative advertisement copy, including: product name, price, function instruction etc. Secondly, *news* refers to new information in a broad sense, e.g. "news" from a newspaper or follow-up stories on a certain topic. Thirdly, description and emotional expression is *differentiated* news as the timeliness of information is less focused in this case; emoticons are identified as a kind of emotional expression. It is also noted that tweets can include news, opinions and emotional expressions simultaneously.

Moreover, there is a preference for such tweets to be displayed directly rather than as hyperlinks. This result conforms to hypotheses put forward by Comm (2010) and Ho

& Dempsey (2010). Through observation, the authors noted that some verified company accounts sometimes tweet with pictures attached as auxiliary expressions, even when the text is irrelevant to their products or services. As shown in Figure 2, the tweeter, Hong Kong Harbour City, a large upscale shopping mall, tweets: “Today is May 8th, the World Smile Day! Did everyone smile today?” with a picture of smiling kitty and emoticon attached in the first tweet.



The second post, displayed in Figure 3, tweeted on the same day, says, “Isn’t that Butler & Wilson crystal panda head iPhone case cute? Come to Harbour City Joyce store and get one” with a picture of the product and emoticon attached. Compared to the first tweet, the second post is explicitly tweeting for product promotion. Both the number of re-tweets and comments of the first tweet surpass that of the second tweet.



Table 6 explores how tweeters’ feelings towards tweets affect their decision to re-tweet. Positive emotional arousal stimulates re-tweeting more effectively than negative emotional arousal on Weibo. Tweets that make people feel happy and warm (91.9%), and awe (44.1%) are more apt to be re-tweeted than those that trigger

anxiety (14.4%), sadness and/or anger (33.3%), which is consistent with Berger & Milkman's (2012) conclusions.

Table 6 - Feelings when re-tweeting

Which of the following best describe your feeling when re-tweeting?(Multiple Choice)	Total	Percentage
I'd like to re-tweet those tweets that make me feel happy or warm	102	91.9
I'd like to re-tweet those tweets that make me feel awe	49	44.1
I'd like to re-tweet those tweets that make me feel anxious	16	14.4
I'd like to re-tweet those tweets that make me feel sad or angry	37	33.3
Others	5	4.5
Total	209	

Based on the results in Table 7, tweets that provide rewards for re-tweeting are not an effective method to increase re-tweeting. The majority of participants (65.8%) would not re-tweet a tweet because it carried possible rewards.

Table 7 -Reward as an Incentive to Re-tweet

If you're informed that by re-tweeting this tweet, you're likely to win a reward, even if the possibility is small, would you consider to re-tweet it?	Total	Percentage
Yes or it depends.	38	34.2
No	73	65.8
Total	111	100.0

Table 8 shows that from the perspective of participants who *are* willing to re-tweet, the allure of reward (29.9%); and nothing to lose by re-tweeting (29.9%) are the soundest reasons for re-tweeting. Overall they do not believe that they will win a reward. One participant mentioned in the *Others* option that she re-tweets such tweets because she did win an reward once, reinforcing her re-tweeting behavior.

Table 8 - Reasons for Re-tweeting for a Reward

Reasons for re-tweeting for a Reward? (Multiple Choices)	Total	Percentage
I'd like to give it a go because I won't lose anything anyway.	20	29.9
I don't buy it but I need to let someone know about it.	14	20.9
The allure of reward	20	29.9
By whom I've been addressed or informed of the original tweet	3	4.5
Whether I've been aroused of some kind of feelings	9	13.4

Others	1	1.5
Total	67	100.0

Table 9 explores possible suggestions by subjects to increase re-tweeting. The technique most chosen by the subjects was to focus on emotional arousal (38.6%); followed by triggering curiosity (29.5%); and increasing the uniqueness or sense of authority (21.9%). Offering rewards (9%) was not perceived as a significant strategy. Two participants chose the *Others* option as they find it difficult to suggest a solution.

In interviews, all C2C sellers identified using opinion leaders as the most effective way of gaining exposure. An opinion leader is someone who has the ability to influence people's opinions and who has an extensive interpersonal network (Rogers, 1995). However, though opinion leaders have major change agent impact, they may not necessarily accept the tweet by companies before their followers. Strategies to attract opinion leaders' attention are another issue that is worth further investigation. Also there are complications for organizations in obtaining cooperation with opinion leaders for re-tweeting.

Table 9 - Recommendations for Increasing Re-tweeting Behavior

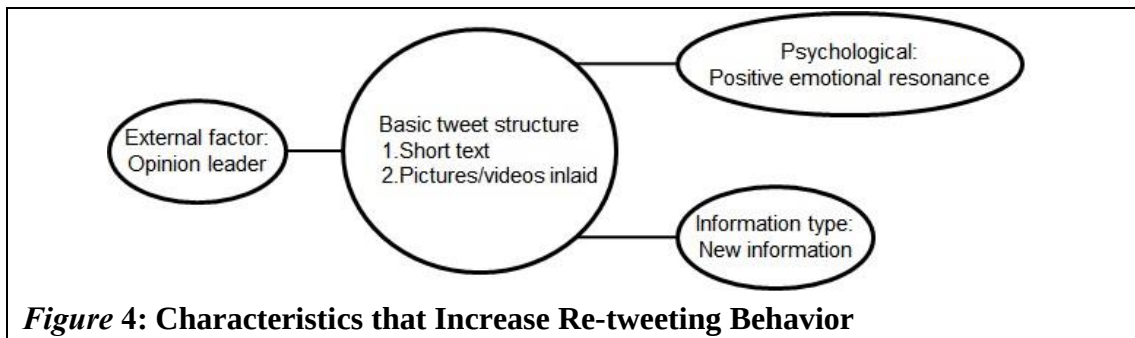
What do you suggest for increasing re-tweeting of a tweet? (Multiple Choices)	Total	Percentage
Reward something for re-tweeting or to increase the probability to win a reward	19	9.0
Pay attention to emotional arousal	81	38.6
Trigger people's curiosity	62	29.5
Increase the uniqueness or sense of authority	46	21.9
Others	2	1.0
Total	210	100.0

It is suggested that the techniques discussed above can be integrated. A well-conceived re-tweet campaign, based on the characteristic behavior of re-tweeters is feasible to increase the volume of re-tweeting. When designing and composing a tweet that is intended to attract re-tweeting behavior among followers, organizations can select techniques that match their profile, demographics etc. While re-tweets by opinion leaders can enhance re-tweeting in a relatively short time frame, emotional resonance takes longer to be cultivated and managed.

Conclusion and Recommendations

Based on this exploratory research, the authors have identified a range of characteristics of tweets that are likely to increase re-tweeting behavior on Weibo:

1. To be short and concise (in terms of structure)
2. To inlay the tweet with pictures or videos (in terms of structure)
3. To post new information (in terms of content, information type)
4. To positively engage opinion leaders (external)
5. To be positively emotionally resonant (psychological)



Limitations and Further Study

There are some limitations of this research that could be areas for further study. The participants in this study are largely confined to ethnic Chinese who belong to the 18-30 age group; who are living in economically developed areas; and who hold college degrees or above. Although they represent the major user demographic of Weibo, their opinions towards re-tweeting and micro-blogging marketing cannot cover the spectrum of tweet-related marketing. Research focusing on other user groups can supplement existing findings to establish a more comprehensive understanding of re-tweeting behavior. Specific marketing strategies based on the participants' behaviors, surfaced in this study could be incorporated into the development of a micro-blogging marketing strategy.

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Personality Types as Correlate of Internet Dependence and Specific Internet Usage among Students of the University of Ilorin, Nigeria

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Abstract

The underlying factors determining internet dependence and specific internet usages are quite enormous especially for students. In view of this, this study examined personality types as correlate of Internet dependence and specific usages such as browsing, instant messaging, social network media, internet games and others amongst University of Ilorin students. Descriptive and inferential statistical tools were utilized to analyze data collected on a sample size of 425 students that were selected based on simple random sampling technique. Findings from the data analyses revealed significant positive and negative relationships established between the three personality types (Extroversion, Neuroticism and Psychoticism) and specific internet usages. It was observed that the three personality types have high correlations with either communications or entertainment related usages or both in varying degrees. Similarly, significant positive relationships were established between the three personality types and internet dependence. Neuroticism personality type for instance has the highest correlation (of .214) depicting that introverts are more dependent on virtual interactions due to their less involvement in face to face interactions. Gender difference is observed in specific internet usages and internet dependence between males and females. Males' dependence on the internet and quantum of specific usages is higher than females. Again, age difference is noticeable in the specific internet usages. The categories of students in the age range of 19-22 years have the highest in all the specific usages compared to other age groups. The study concluded by recommending that future studies should consider the impact of well-being outcomes on internet dependence and specific internet usages amongst students in Nigeria's higher institutions of learning. These outcomes include, among others, relationship problems, academic failure, self-esteem, social support, loneliness and anxiety. By doing this, socio psychological problems emanating from excessive internet usage by campus students can be alleviated and controlled.

1.0 Introduction

Since its revolution in the late 1990's into a powerful new institution (Goldsmith, 2000), the internet has continued to provide many platforms that are widely accepted and utilized by people of different age categories. It has become a source highly used for reference materials by the public; its usefulness transcends geographical and racial boundaries as it facilitates the sharing of information and expertise between professionals (Cotton, 2001).

The internet using population had been growing in an unprecedented manner. For instance, in one of the studies on internet usage, it is reported that individuals ranging from 18-34 years are the most active on-line users of the internet (Pastore, 2000). "The Pew Internet Report" corroborated this by reporting that the highest rate of internet users (88 percent) are among eighteen to twenty nine years old, with decline in rates as age increases (Pew Research Center, 2006). As reported in these independent studies, it can be deduced that the category of people that fall within

these age ranges are intellectually active users craving for knowledge in their various endeavors. College students fall in this category of heavy internet dependent users due to the different levels of accessibilities through direct internet connection in dormitories, e-libraries and computer laboratories (Kandell, 1998).

It is common place for college students to perform such tasks as checking of e-mail, visiting cybercafés and even surfing the internet via various internet accessing devices like mobile phones, ipad, androids and so on. Since most campuses have the latest technologies with high speed connections allowing for faster downloads and internet surfing (Scherer, 1997); they encourage internet use among students by providing access to the school's network service in an arrangement that makes access affordable and convenient. Therefore, the rate at which the internet is being used has reflected differences in people's needs, preferences, values, personal motivations and personality characteristics (Zamani et. al. 2011) which cut across all ages. Personality types such as extroversion, introversion, psychoticism are reflective of a wide range of human behavior, especially in the rate of using technologies which include the internet (Wiggins and Trapnell, 1997).

Generally, personality types are classified into three categories based on the characteristics and traits peculiar to each; which are extraversion, neuroticism and psychoticism respectively. Those in the first category are referred to as extroverts. These personalities are sociable, they always like to be around people, but they have the tendency of being constantly irresponsible. They do whatever they want and are entirely focused on seeking sensations. The second category is the neuroticism personality type. Those with this personality type exhibit anxiety, constant worries, going in and out of depression, feelings of guilt as they often have an extremely low self-esteem. The third category is the psychoticism which is an extreme personality type. They are characterized by aggressiveness, assertiveness, egocentrism and completely full of themselves. But, they can also be manipulative and unsympathetic, achievement and goal oriented, which means they are also tough-minded, masculine and dominant. In view of these categorizations, it can be said that one's personality type is a function of behavior which may amount to determining the extent of students' internet dependence and their involvement in the specific usages.

Internet usage is an individualistic driven activity, therefore, does not require coordination with friends or anyone else, nor does it require planning ahead (Scherer, 1997). On this account, it means that personality characteristics are brought to the fore in their day to day interactions with specific usages on the internet. Foreign based researches according to the literature have identified some peculiar problems associated with internet use by students in the form of addiction and over dependence and personal factors such as loneliness, low self-esteem, relationship and identity problems, personality differences and so on. The findings of most these researches cannot be generalized to students in the Nigerian environment on account of cultural and environmental differences. On this note, there is an urgent need for scientific investigations on the influence of personality types of students on internet dependence and specific usages due to dearth of empirical researches in the area of personality types and internet use in the Nigerian environment. The question to be addressed anchors on: Are there existing relationships between the personality types of students,

their specific usages and internet dependence? In view of this, this study intends to examine the personality types of students in relationship with specific usages on the internet and internet dependence with university of Ilorin, as a case study taking into consideration age and gender factors.

THEORETICAL FRAMEWORK

The most appropriate theory for this study is the uses and gratification approach which emphasizes on motives and self-perceived needs of people as it relates to specific types of media and media content. The internet being a medium for communication is driven by self and myriad motives especially in a school's environment where students constitute the majority of users. Therefore, the determinants of these motives are in the form of basic needs, social situation, individual background such as experience, interest, education, personality characteristics and so on propel the use of the specific types of media and the satisfaction derived from them.

In one of the uses and gratification studies, few dimensions guiding internet use have been identified such as relaxation, companionship, habit, entertainment, social interaction, information, surveillance, arousal and escape (Lin, 1999). These dimensions are also part of the underlying motives influencing internet use amongst students. In support of this theory, McQuail (1994) postulated that personal, social circumstances and psychological makeup of an individual influence the general habits of media use, belief and expectations about the benefits offered by such media, which shape specific media choices and consumption. In other words, it can be inferred that personality types which are unique psychological traits with underlying personal motives may influence internet dependence and specific usages amongst students. On the other hand, critics of this theory have argued that it is highly individualistic, taking into account individual gratification derived from media use, while the social context of media is largely ignored, that is, the meaning derived from the media content are not given priority.

LITERATURE REVIEW

Students are becoming increasingly reliant on computer applications, especially the internet and related products and services. Several researchers have delved into internet use amongst college students by examining internet addiction, internet use, excessive internet use and its consequences on the well-being of students. Some socio-psychological variables have been correlated with students' internet use such as depression, addiction, self-esteem, social support and a few others.

College students are particularly susceptible to problems related to internet use, and specifically to excessive internet use (Anderson, 2001). According to Anderson, 72% of college students are internet users and 87% of college students have internet access. Therefore, these percentages account for the numerous problems of internet use among students from all walks of life. One of the problems of internet use is internet addiction or excessive use. Internet addiction is deficient self-regulation i.e. failure to regulate one's internet use (Larose, Lin and Esatin, 2003). Kandell (1998) enumerated three factors that could account for excessive internet use amongst students. These are: (i) free accessibility to the internet, (ii) developing new

relationships (iii) identity formation. Apart from these factors mentioned by Kandell, personality types of students can also determine the extent of internet use which may eventually lead to problems affecting various facets of the student's life such as academic, interpersonal, financial, physical and mental health.

PERSONALITY TYPES AND SPECIFIC INTERNET USAGES BY STUDENTS

Early studies of Internet use often failed to distinguish between types and functions of use. For example, studies examined whether individuals used or did not use the Internet (Matthews and Schrum, 2003). These typologies ignore significant differences in the types, and more so, overall levels of use were often reported rather than specific types and levels of use (Anderson, 2001). General internet use may not reveal the intricacies that more specific measure of uses might illuminate (Cotton, 2008). Personality traits are distinctive pattern and special characteristics of thinking, emotion and behavior which determines an individual style of interaction with the physical and social environment (Kalichman et al. 2003). In short, personality traits of individuals are relatively stable, consistent and coherent throughout a person's life time. This shows that internet behavior of an individual can be predicted based on their personality traits. Wolfradt and Doll (2001) in their study also supported the fact that personality traits influenced motives for internet use. In their study, the trait of neuroticism was associated with greater motivation to use the internet for purposes of entertainments and interpersonal communication. Extraversion was associated only with the motive of interpersonal communication. In contrast to the above mentioned studies, Engelberg and Sjoberg (2004) found no association between internet use and personality characteristics.

Some past studies have examined empirically the relationship between internet dependence and personality traits. Welsh (1999) surveyed a one-campus sample of 1000 college students testing internet dependence. The results of his study revealed that excessive internet use was directly linked to specific problems such as academic failure, difficulty in maintaining relationship, developing sleep problems and reducing everyday activities. The findings from this study have shown that the problems associated with excessive internet use cannot be totally eliminated, but can be controlled especially in school environments where internet facilities are provided for easy access.

In the same manner, Kunimura et al. (2004) investigated 113 students at Loyola, Marymount University and found a significant positive relationship between neurosis and internet dependence as well as negative relationship between extroversion and internet dependency. The explanation for a negative relationship between extroversion and internet dependency was that extrovert students preferred interaction with other individuals in social situations to interaction in the virtual world; while introverts are less likely to engage in face to face interactions due to their shyness, feelings of shame and low self-esteem. A contrasting result in one of the studies by Kraut et al. (2002) revealed that extroverts tended to benefit from internet use with frequent users showing lower levels of negative affect, less loneliness and greater self-esteem; while more introverted frequent users tended to have greater loneliness, negative affect and lower self-esteem. Gombor and Vas (2008) studied the dependency on the internet and the five personality factors among medical students in Israel and Hungary. The

result of the study demonstrated that both extroversion and emotional stability were best predictors of internet dependency among medical students. On the other hand, a similar study found a significant negative relationship between three personality characteristics of loyalty, extroversion and compatibility and internet dependency (Landers and Lounsbury, 2006).

In the same vein, Zamani et al. (2011) investigated internet addiction based on personality characteristics of high school students in Kerman, Iran. This study examined the relationship between gender and field of study of students and their personality characteristics. The results of the study revealed that there was no significant relationship between gender and the five personality characteristics; while on the other hand, a significant relationship was established between the personality trait of emotional stability and field of study ($P < 0.01$). The highest emotional stability was found in mathematics students, followed by humanities and sciences respectively. Higher emotional stability in students of mathematics could be due to their logical approach towards everyday problems resulted from their experience. This is invariance to the study of Lievens et al. (2002) that found students with different academic fields to have significantly different personality characteristics.

Furthermore, in the same study, Zamani et al. (2011) found no significant relationship between gender and internet dependency. Overall, the findings revealed that male students were more likely to depend on the internet than females. The reason being that boys can freely access the internet at home, school or even internet cafes, while girls do not enjoy such privileges due to societal expectations. Other researchers have identified the relationship between internet dependency and demographics including gender (Kim et al. 2011). Amichai-Hamburger and Ben-Artzi (2003) also found that personality traits were associated with the internet use of women, but not men.

These past reviews have revealed diverse relationships between personality traits, demographic characteristics of students, general internet uses and their socio-psychological implications. Findings from these studies have shown that one's personality type may determine the extent of internet use and other associated problems related to internet use.

RESEARCH OBJECTIVES

In this present study, the following research objectives will be given prominence:

- (a) Firstly, determining the influence of students' demographic characteristics (age and gender) on specific internet usages and internet dependence.
- (b) Secondly, determining whether there exists relationship between personality types of students (extroversion, neuroticism and psychoticism) and specific internet usage.
- (c) Thirdly, to determine whether there exists relationship between personality types of students (extroversion, neuroticism and psychoticism) and internet dependence.

METHODOLOGY

The methodology adopted for this study was the survey method using a well-structured questionnaire to capture data. The questionnaire comprised of four sections. Section A captured students' demographic variables such as age, gender, course of

study, level of study. Section B comprised of a 7 item scale developed by (Anderson, 2001) measuring students' internet dependence. Section C comprised of three sub-scales specifically known as the revised short form of the Eysenck Personality Questionnaire Scale (EPQS) developed by Eysenck and Barrett (1985) measuring extraversion, neuroticism and psychoticism respectively. The EPQS consisting of 12 items for each sub scale having a yes/no option; while Section D draws on specific uses of the internet such as emailing, browsing, videoing, social networking and so on.

PSYCHOMETRIC PROPERTIES OF THE EPQS SUB SCALES AND INTERNET DEPENDENCE SCALE

Previous studies had reported the psychometric properties of the short form of the revised Eysenck Personality sub scales. Francis, et al. (1992) reported the Cronbach's alpha of each of these subscales in a cross cultural study across four English speaking countries as samples in this manner. Extroversion .78, .83, .85 and .87; neuroticism was reported as .79, .80, .81 and .83 while the short form psychoticism achieved .31, .41 and .51. The reliability of these sub scales were re-established for this present study. The Cronbach's alpha for each of these scales are as follows: Extroversion scale (.70), Neuroticism scale (.71) and Psychoticism (.57) respectively. Extroversion and Neuroticism personality sub- scales attained the minimum score of (.70) which is the acceptable score for reliability measures, except psychoticism scale which had been consistently low from past researches. The psychoticism scale suffers from three main defects which are: (1) low reliability (2) low scoring method and (3) grossly skewed distribution (Barrett and Eysenck, 1984). Another basic reason for the low reliability of the psychoticism scale can be explained from the view point that it measures the negative aspects of personality such as lack of empathy, hostility, cruelty and non-conformism etc. This is unlike extroversion scale that comprises of sociability and activity items (Cattell and Tsujioka, 1984). The internet dependence scale was developed by Anderson (2001) and a high content validity was reported in previous study. This present study further determined the reliability of the scale. The Cronbach's alpha for the internet dependence scale was (.61) which is below the minimum score of (.70). The reason for the low reliability of this scale is due to the small number of items that made up the scale.

SAMPLE SIZE OF TARGET POPULATION

This is a one campus study comprising of only undergraduate students of the University of Ilorin, Kwara State, Nigeria as the target population. It was conducted in the second semester of 2011/2012 session. The researcher employed the simple random sampling technique in the selection of eight out of the eleven Faculties in the University of Ilorin that were used for the study covering the following: Arts, Business and Social Studies (BSS), Communication and Information Sciences (CIS), Sciences, Engineering, Clinical Sciences, Education and Law respectively. Out of the 500 questionnaires distributed, 425 valid ones were used for this study. 425 randomly selected students from the eight faculties irrespective of tribe, course, level, age represented the sample size for this study.

DEMOGRAPHIC FEATURES OF THE SAMPLE SIZE

The sample size of 425 students used for this current study comprised of 233 Male students (54.8%) and 192 female students (45.2%). The students were classified into three age groupings comprising of 50 students (11.8%) below 18 years, 244 (57.4%) between 19-22 years and 131 (30.8%) above 22 years. The students' internet usages were categorized based on daily, weekly and monthly usages respectively. 279 students (65.6%) used the internet for daily usage, 109 (25.6%) weekly usage and 35 (8.2%) were involved in monthly usage. In all the age groupings, students whose ages fall between 19 -22 years had the highest in daily, weekly and monthly internet usages in the following percentages. 149 students (35.1%) used the internet daily, 72 (16.9%) weekly while 21 students (4.9%) monthly; while on the contrary, 135 students (31.8%) within the age groupings of (19 -22 years) had short internet duration of 2-5 hours. This may be due to the lack of full connectivity on account of epileptic power supply on campus as at the time data was collected.

DATA ANALYSIS AND PRESENTATION

Data collected were analyzed using the statistical packages for social sciences (SPSS) with the aid of relevant descriptive and inferential statistics to test the proposed hypotheses.

Hypothesis1: Determining the influence of students' demographic characteristics (age and gender) on specific internet usage and internet dependence. This hypothesis was analyzed using frequencies and percentages. Hypothesis 1 has revealed that a relationship exists between the age ranges and gender on the specific internet usages.

Table 1: RELATIONSHIP BETWEEN AGE AND SPECIFIC INTERNET USAGES

Age range	Specific internet usage	Frequency	Percentage (%)
Below 18	Browsing	45	10.6*
	Instant messaging	34	8.0
	E-mailing	33	7.8
	Chatrooms	33	7.8
	Music	32	7.5
	Video	30	7.1
	Gaming	28	6.6
	Downloading	38	8.9
	Social networking	44	10.4*
	Searching for materials	48	11.3*
19-22	Browsing	214	50.4*
	Instant messaging	172	40.5
	E-mailing	168	39.5
	Chatrooms	183	43.1
	Music	156	36.7
	Video	145	34.1
	Gaming	116	27.3
	Downloading	218	51.3
	Social networking	228	53.6*
	Searching for materials	235	55.3*
Above 22	Browsing	120	28.2*
	Instant messaging	107	25.2
	E-mailing	96	22.6
	Chatrooms	92	21.6
	Music	83	19.5
	Video	72	16.9
	Gaming	59	13.9
	Downloading	111	26.1
	Social networking media	114	26.8*
	Searching for materials	125	29.4*

As revealed in table 1 above, the results have shown a trend of the same sequence in specific internet usages across the three age groupings. All the age groups have almost the same sequences in the specific usages e.g. (searching for materials, social networking media, browsing, downloading and so on in a sequential order).

TABLE 2: RELATIONSHIP BETWEEN GENDER AND SPECIFIC INTERNET USAGES

Gender	Specific internet usage	Frequency	Percentage (%)
Males	Browsing	212	49.9
	Instant messaging	182	42.8
	E-mailing	178	41.7
	Chatrooms	176	41.4
	Music	146	34.4
	Video	142	33.4
	Gaming	124	29.2
	Downloading	204	48.0
	Social networking media	217	51.1*
	Searching for materials	221	52.0*
Females	Browsing	167	39.3*
	Instant messaging	131	30.8
	E-mailing	119	28.0
	Chatrooms	132	31.1
	Music	125	29.4
	Video	105	24.7
	Gaming	79	18.6
	Downloading	163	38.4
	Social networking media	169	39.8*
	Searching for materials	187	44.0*

Table 2 has revealed gender differences in the specific internet usages engaged by male and female students. Overall, the specific internet usages were majorly dominated by male students which depicts that they are more involved in the specific internet usages such as browsing (49.9%), emailing (41.7%), downloading (48.0%) and social networking media (51.1%) among others than female students.

TABLE 3: RELATIONSHIP BETWEEN AGE AND INTERNET DEPENDENCE

Age range	Internet dependent	Not Dependent	Total
Below 18	25 (50%)	25 (50%)	50
19-22	127 (52.05%)	117 (47.95)	244
Above 22	73 (55.73%)	58 (44.27%)	131
Total	225 (52.94%)	200 (47.06%)	425

Table 3 above has revealed age differences on internet dependence among students. 127 (52.05%) students in the age category of 19 -22 years were more dependent on the internet than the other age groupings. This depicts that students in this category are actively involved on the internet due to various tasks and activities that they are engaged in.

TABLE 4: RELATIONSHIP BETWEEN GENDER AND INTERNET DEPENDENCE

Gender	Internet Dependent	Not Dependent	Total
Males	140 (60.01%)	93 (39.91%)	233
Females	85 (44.27%)	107 (55.72)	192
Total	225 (52.94%)	200 (47.06%)	425

Table 4 depicts a relationship between gender and internet dependence. It shows that (60.1%) of male students depended on the internet for various activities than female students (44.27%). Males' preferences on the internet for activities such as browsing,

emailing, downloading, social networking media among others are higher than female students.

Hypothesis 2: Determining whether there will be a significant relationship between the three personality types and specific internet usage. Pearson correlation statistical tool was used to establish a relationship between the independent variables (personality types) and dependent variables (specific internet usages).

Table 5: Pearson Correlation table showing the relationship between the three personality types and Specific Internet Usages

Specific internet Usage	Mean	Cases (N)	Extroversion	Neuroticism	Psychoticism
Internet browsing	.89	425	-.014	.019	.051
Instant messaging	.74	425	.172**	.011	.079
E-mailing		425	.128**	-.001	.102**
Chat rooms	.70		.192**	.062	-.071
Music	.72	425	.202**	.178**	.056
Video	.64	425	.181**	.144**	.132**
Gaming	.58	425	.158**	.080	.128**
Downloading	.48	425	.127**	.034	-0.40
Social networking	.86	425	.144**	-.019	-.132**
Searching for online materials	.91	425	.005	-.009	-.232**
	.96	425			

Correlation is significant at the 0.01 level (2-tailed)

Table 5 above has revealed positive and negative relationships between the three personality types and specific internet usages. Extroversion personality type had a significant positive relationship on specific internet usages such as Instant messaging (.172), Emailing (.128), Chatrooms (.192), Music (.202), Videoing (.181), Gaming (.158), Downloading (.127) and Social networking activities (.144) respectively. Music had the highest correlation (.202) while downloading (.127) being the lowest. On the other hand, Neuroticism personality types had significant positive relationship with Music (.178) and Videoing (.144) respectively. Ironically, Psychoticism which is an extreme personality type had both positive and negative relationships. Positive significant relationship with specific internet usage such as Emailing (.102) Videoing (.132) and Gaming (.128); and a negative significant relationship with Social networking (-.132) and Searching for materials (-.232). Overall, the three personality types had positive relationships with videoing in varying degrees with extroversion having the highest correlation (.181)

Hypothesis 3: Determining whether there will be a significant relationship between the three personality types and Internet dependence

Table 6: Pearson Correlation table showing the significant relationship between the three personality types and internet Dependence

Personality Types	Internet Dependence	Level of Significance
Extroversion	.163**	P < 0.01
Neuroticism	.215**	P < 0.01
Psychoticism	.130**	P < 0.01

Correlation is significant at the 0.01 level (2-tailed)

The result of the analysis as shown in table 6 revealed a positive significant relationship between the three personality types and internet dependence. Neuroticism personality type had the highest positive correlation (.215) followed by Extroversion (.163) and lastly psychoticism with the lowest positive correlation (.130).

DISCUSSION

This present study has clearly demonstrated that positive and negative significant relationships exist between personality types, specific internet usages and internet dependence of campus students in the University of Ilorin, Nigeria. Specifically, the influence of age was reflected in the specific internet usage across the age groupings. Students in this category of 19-22 were actively involved in the specific internet usages than other age groupings. These categories of students were the most active online users compared to the other two age groups. Although, the age groupings followed a unique trend in their specific internet usages in these order: searching for materials, Social networking media, Browsing, Downloading and so on. The uniqueness of the pattern in the specific usages across the age groupings confirm that students' motive for internet usage may fall under any of the broad categories of information seeking, convenience, entertainment and social interaction (Kim et. al. 2011). Furthermore, gender differences in the specific internet usages and internet dependence between males and females has revealed that males are more internet dependent than females and they spend more time on each of the specific internet usages. Males' dominance on each of the specific internet usages is a confirmation of the belief that boys are more knowledgeable in the use of modern technologies (Zamani, 2010). This result is consistent with previous gender studies on internet usage that have reported males' dominance on internet usage (Kim et. al. 2011; Hashemi, 2011).

The second hypothesis which predicted that there will be significant relationships between the three personality types of students and specific internet usage was supported. Personality traits have been found to have a significant role in predicting various communications and entertainment related online activities as well as content creation (Veronica et al. 2011). The findings revealed that communication and entertainment based internet usages were common denominators in all the personality types except that they differ on account of the type of communication channel and entertainment. For instance, extraversion personality type had a significant positive relationship with specific internet usages such as instant messaging, emailing, chat rooms, music, video, gaming downloading and social networking media. This conforms with previous research findings that positively related extroversion to the use of leisure services (Hamburger and Ben-Artzi, 2000), interpersonal communication (Wolfradt and Doll, 2011), engagement in social media (Correa et al. 2010; Ryan and Xenos, 2011) and playing online games (Teng, 2008). On the other hand, neuroticism personality type was associated with entertainment media only (music and video). Our result is consistent with other studies that have found neuroticism personality type to be associated with companionship as a motive (Amiel and Sargent, 2004; Gombor and Vas, 2008). This purports that the minimal face to face interaction of introverts tends to be diverted to online entertainment related activities such as music and video that are faceless interactions. Similarly, Psychoticism personality type had significant positive relationship with specific

internet usages such as emailing, video and gaming while a significant negative relationship with social networking media and searching for online materials. In essence, Psychoticism personality type was also positively associated with communication and entertainment related usages. The dogmatic and non-conformist nature of psychotics could have accounted for the negative relationships in this regard.

The third hypothesis which predicted that there will be a significant relationship between personality types and internet dependence was also supported. The three personality types were all positively correlated with internet dependence at varying significant levels ($P < 0.01$). In contrast to this result, Engelberg and Sjoberg (2004) found no association between internet use and personality characteristics. The reason for positive relationship between the neuroticism personality type and internet dependence is consistent with the results of other studies that reported that introverts are more likely to engage in virtual interactions due to their shyness, feelings of shame and low self-esteem (Kunimura et al. 2000). Extroversion personality type was also positively associated with internet dependence. Extroverts depended on the internet for social and psychological benefits such as social involvement, communication and greater self-esteem (Kraut et al. 2002). Lastly, psychoticism which is an extreme personality type had the lowest but positive correlation with internet dependence. The achievement and goal oriented behavior of psychotics might have predicted their dependence on the internet.

CONCLUSION AND RECOMMENDATIONS

Personality types, demographic variables such as age and gender of students are predictive of internet dependence and specific internet usages despite cultural, ethical and social diversities amongst students in the University of Ilorin campus. In view of this, it is recommended that future researches should determine the relationship that exists between other well-being outcomes such as self-esteem, social support, anxiety, loneliness and internet dependence alongside specific usages amongst students in Nigeria's Higher Institutions of learning. On this account, Educationist, Counselors and Mental health tutors in colleges and Higher Institutions of learning will be able to manage and control psychological and mental health issues emanating from students' excessive internet usages.

In conclusion, due to the dominance of male students on the internet especially in the area of specific usages such as emailing, browsing social networking and so on, web designers should design solutions taking into cognizance specific usages that are capable of meeting females' needs and preferences.

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Author's Biography



My name is Afolayan Oluyinka Titilope. I am a female, married with two children. I hail from Osun state in Inisha, Odo-Otin Local Government area. My working career began in Banking which spanned for 10 years and 6 months. I further crossed to academics where I started a career in the information profession. Presently, I am an Assistant lecturer in the Department of Information and Communication Science, University of Ilorin, Ilorin in the Faculty of Communication and Information Sciences. I am equally a Ph.D student in the department of Information Resources Management, Babcock University, Ilisan- Remo, Ogun state.

Current Science Journal: A Bibliometric Study

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Abstract

This paper presents a bibliometric analysis of the journal titled “Current Science” for the period between 2006 to 2010. The data were downloaded from the journal’s website. The analysis cover mainly the number of articles, authorship pattern, channels of communication, geographical distribution, sectoral distribution, highly productive institution etc. The findings point out the merits and weakness of the journal which for its further development. The result showed that 39.87% articles were contributed by two authors. Study reveals that only 39.14 % citations (17345) involved single authors and 60.86 % citations (26977) involved multi-authors indicating very large collaborative effort in the scientific endeavour. The result found that more than 77.48 % citations were from journal articles, followed by books 6.92 % citations, conference proceedings with 5.28 % citations, theses / dissertations with 2.81 % citations, research reports with 1.29 % citations, seminars/workshops with 1.02 % citations etc. There is need for the journal to come out with an editorial policy that would encourage usage and citation of electronic resources by the contributors to the journal. This is necessary because the ratio of electronic citation to print citation is too low.

Keywords: Bibliometrics, Bibliography, Authorship pattern, Source of Information, Geographical distribution, Citation, Websites, Dissertations.

Introduction

Periodicals are the primary source of information and an important media for communication. They play a major role for communicating the latest research findings and publishing the articles containing the current development in any field of knowledge. Research is a prolonged process, aiming at discovering the truth and is a means for acquiring knowledge about any natural or human phenomena. Research in all fields is growing at a faster rate and particularly the field like science is advancing. This might be due to the gradual change in the trends of research. In the process of identifying the research trends in a field, it is essential to analyse the various patterns that are evident in the literature in the field. Due to information explosion, and multidisciplinary growth of subjects, it is very difficult to analyse the various patterns that are evident in the field. The bibliometric studies, which are mostly related to quantification of items and their pattern of distributions are useful in understanding some of information phenomena and may help in planning many of the

library activities. The first recorded study of Bibliometric topic was in 1917 by Coles and Eales with the 'Statistical analysis of literature in the history of comparative anatomy; which served as a model for applying the counting technique in the evaluation of international activities. Alan Pritchard first introduced the term Bibliometrics' in 1969 to mean 'the applications of mathematics and statistical methods to books and other media of communications.

Need for the study

The periodicals are the indicators of literature growth in any field of knowledge. They emerge as the main channel for transmitting knowledge. Due to the escalating cost of the periodicals and lack of adequate library budgets the selection of any particular journal for a library should be done more carefully. Therefore, the library authorities are forced to reduce the number of journal subscriptions. Bibliometric analysis has many applications in the Library and Information science field in identifying the research trends in the subject, core journals, etc. and thereby framing new subscription policy for tomorrow. These studies will be helpful for librarians to plan a better collection development.

Review of Literature

Hazarika, Goswami, and Das (2003) opined that, "Identify the pattern of publication, authorship citation and coverage of journal papers in terms of geographic, subject, organization and other related parameters. In their study of authorship patterns, Perianes-Rodriguez, Omelda-Gomez and Moya-Anegon (2010) opined that," Detection and identification of communities with factor analysis is a useful tool for experts in bibliometric and scientometric studies. Likewise the networks obtained are a useful framework for decision making." The result could help in library resource management and planning strategies for documentation service to the user community of that particular literary discipline.

Similarly, Glover and Bowen (2004) hold the view that, "There are many ways with which bibliometrics and citation tools can be used. Bibliometric analysis can be used to take macro-view of research output." The generality of the usage are centered towards multidirectional approaches and studies on documents and authors taking into consideration the appropriate mathematical and statistical analysis to be applied. Lo (2010) in his study of genetic engineering research says that, "During the past several decades, plenty studies were done to show the productivities and research impact. There are quite an amount of studies which applied the methods adopted from bibliometrics while periodical articles were used for analysis." The result of the analyses done usually exhibits a lot of useful information that could be used in the proper handling of information sources and resources in a given library, information centre, organization or institution.

[Thanuskodi](#) (2010) discussed the research output performance of social scientists on social science subjects. The analysis cover mainly the number of articles, authorship pattern, subject wise distribution of articles, average number of references per articles, forms of documents cited, year wise distribution of cited journals etc. [Yeoh and Kaur](#) (2008) analyses the publication output of Research in Higher Education for subject

support in collection development in the light of growing interest in diversified domains of research in higher education. Consequently, analysis of 40 issues of publications revealed a diversified usage pattern of bibliographic reference sources by contributing researchers, with a cumulative total of citations being 8,374. A positive trend in research collaboration of contributing authors, and a steady growth in the use of reference sources, periodicals and web documents in the citations signify the trend of scholarly communication of research works in the electronic age. Similar to other disciplines of research findings, journals and books were the most cited source materials for researchers. This literature is scanty. Find more studies on bibliometrics and report their findings.

Oyediran-Tidings, Oyediran and O. Sunday (2003) used citation analysis as an operational variable in the study of four journals in the built environment. They found out among other things that the mean article per journal (MAPJ) was very low compared to journals in library and information profession. They also revealed that referencing styles of these journals were not standardized, that is why the study recommends peer-reviewing and strict adherence to editorial practices.

Citation analysis has been used to evaluate the use of library collection. One of such evaluation was done in the United State by Sylvia (1998) who analyzed the bibliographic citations of research papers by undergraduate and graduate students in the psychology department at St Mary's University and made a decision for subscription or discontinuation of journals on the basis of their use and cost effectiveness.

Bhat and Sampath Kumar (2008) analyzed citations of research articles from scholarly electronic journal published in 2000-2006. They focused on the extent to which scholars are using web- based sources in scholarly electronic journals. The result shows that 81.49% of articles published in selected 9 electronic journals during the period have web references. Out of 25730 references 56.54% are print journals and 43.52% are web references.

Objectives of this study

The primary objective of the present study

- To find out the range and percentage of references per article.
- To identify the authorship pattern of cited references.
- To examine the channels of communication preferred by the scientists;
- To determine the geographical distribution of contributors
- To determine the sectoral distribution of contributors

Methodology

Methodology applied in the present study is bibliometric analysis which is used to study in detail the bibliographic features of the articles and citation analysis of references appended at the end of each article, published in 120 issues of Current Science Journal from 2006 to 2010. The data pertaining to Current Science Journal regarding 1423 articles featured in volume 90 to 99. A total of 44,322 citations were

collected. The citations were examined and analysed based on the objectives of the study.

Analysis

Distribution of Contribution

Table-1 Volume wise Distribution of Articles

Year	Vol. No.	No. of issues	No. of contribution	Percentage
2006	90	12	176	10.36
	91	12	162	9.54
2007	92	12	171	10.07
	93	12	162	9.54
2008	94	12	169	9.95
	95	12	177	10.42
2009	96	12	162	9.55
	97	12	166	9.78
2010	98	12	172	10.13
	99	12	181	10.66
Total		120	1698	100.00

The journal published 1698 research papers during the period of study i.e. from 2006 to 2010. The journal on an average has published 340 research papers per year. The above table showed that the great number of articles were published in the year 2010 (353) and lesser in the year 2009 (328) articles.

Authorship Pattern

Table-2 Authorship Pattern

Year	Number of Authors					Total
	1	2	3	4	5 & more	
2006	79	134	66	35	24	338
2007	63	116	82	40	32	333
2008	84	142	54	32	34	346
2009	54	138	76	42	18	328
2010	62	147	74	48	22	353
Total	342	677	352	197	130	1698
Percentage	20.14	39.87	20.73	11.60	7.66	100

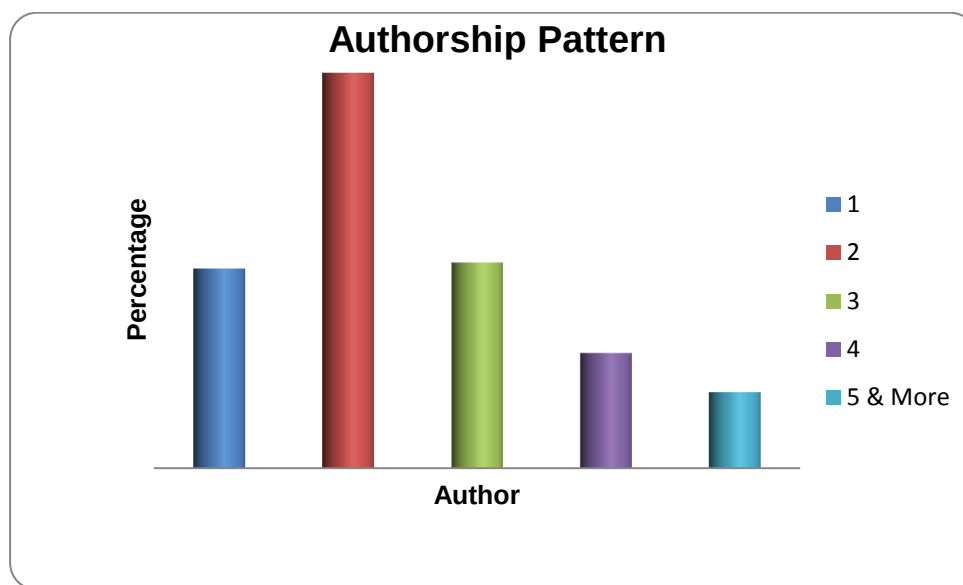


Table 2 reveals the authorship pattern of the articles published during the period of study. A considerable number of articles were contributed by two authors (39.87%). This is followed by three authors with 352 (20.73%) articles, single authors contributed 342 articles (20.14%) and four authors contributed 197 articles (11.60%).

Table-3 Year-wise Authorship pattern

Authorship	Year					Total	Percentage
	2006	2007	2008	2009	2010		
Single	79	63	84	54	62	342	20.14
Joint	259	270	262	274	291	1356	79.86
Total	338	333	346	328	353	1698	100.00

The table 3 showed that out of 1698 articles contributed, the joint authorship article were 1356 (79.86%) articles while the rest 342 (20.14%) articles were contributed by single author.

Range and Percentage of references per article

Table-4 Range and Percentage of references per article

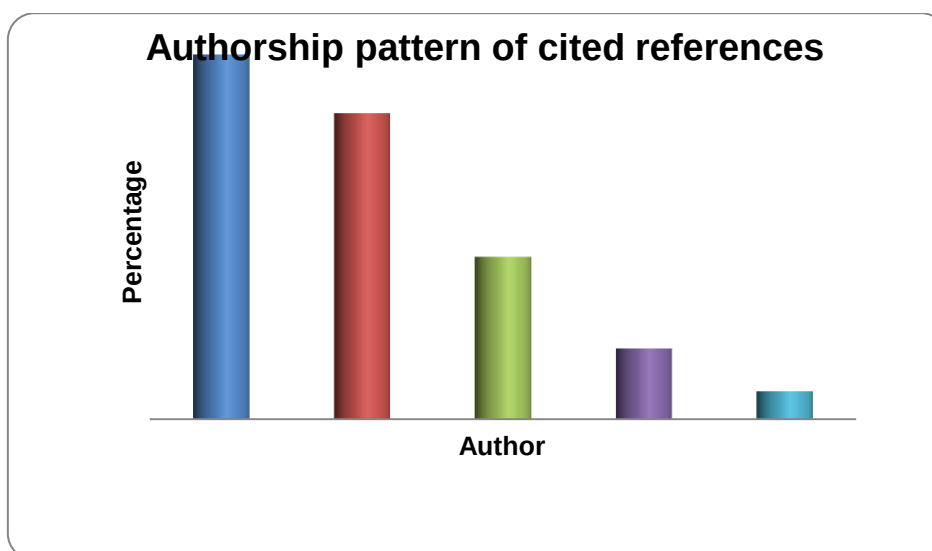
Number		Percentage
References per Article	Articles	
1-10	103	6.07
11-20	317	18.66
21-30	564	33.22
31-40	446	26.27
41-50	118	6.95
51-60	67	3.95
61-70	56	3.29
>71	27	1.59
Total	1698	100.00

The table 4 reveals the range and percentage of references per article. Of the total 1698 articles, 564 (33.22 %) articles have references varying between 21-30. This is followed by 446 (26.27 %) articles with references ranging from 31-40, 317 (18.66%) articles with references between 11-20, followed with 118 (6.95 %) while articles with references between 41-50 were 103 (6.07 %).

Authorship pattern of cited references

Table-5 Authorship pattern of cited references

Sl. No.	Authorship Pattern	No. of Citations	Percentage
1	Single	17345	39.14
2	Two	14570	32.87
3	Three	7719	17.42
4	Four	3368	7.59
5	Five and more	1320	2.98
	Total	44322	100.00



On analysing the extent of collaboration, it was found that only 39.14 % citations (17345) involved single authors and 60.86 % citations (26977) involved multi-authors indicating very large collaborative effort in the scientific endeavour.

Channels of Communication preferred by the Scientists

Table-6 Channels of Communication Preferred by the Scientists

Sl. No.	Channels of Communication	No. of Citations	Percentage
1	Journals	34337	77.48
2	Books	3067	6.92
3	Conference Proceedings	2344	5.28
4	Theses / Dissertation	1246	2.81
5	Research Reports	574	1.29
6	Seminars / Workshops	456	1.02
7	Technical Reports	421	0.94

8	Special Publications	373	0.84
9	Newsletters	342	0.77
10	Scientific Reports	286	0.65
11	Annual Reports	237	0.54
12	Websites	228	0.52
13	Abstracts	224	0.51
14	State-of-the-art-Reports	187	0.43
	Total	44322	100.00

Table-6 showed that the scientists communicated their research results in variety channels. More than 77.48 % citations were from journal articles, followed by books 6.92 % citations, conference proceedings with 5.28 % citations, theses / dissertations with 2.81 % citations, research reports with 1.29 % citations, seminars/workshops with 1.02 % citations, etc. It is found that the researchers preferred communicating their research through journal articles more frequently for their research work, than any other types of communication channels.

Institution wise Contribution

Table-7 Institution-wise contribution of articles

Name of the Institution	No. of Articles	Percentage
Universities	868	51.12
Colleges	216	12.73
Research Institutions	449	26.44
Govt. Departments	137	8.07
Societies	28	1.64
Total	1698	100.00

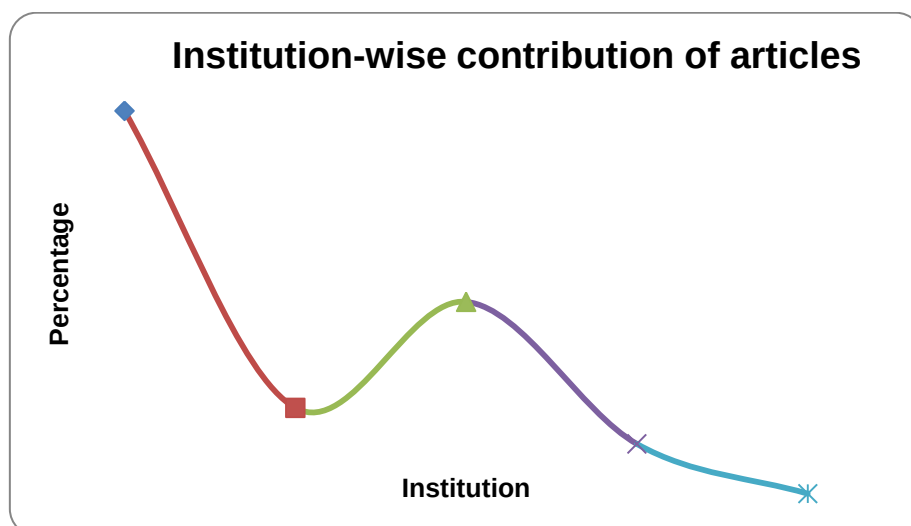
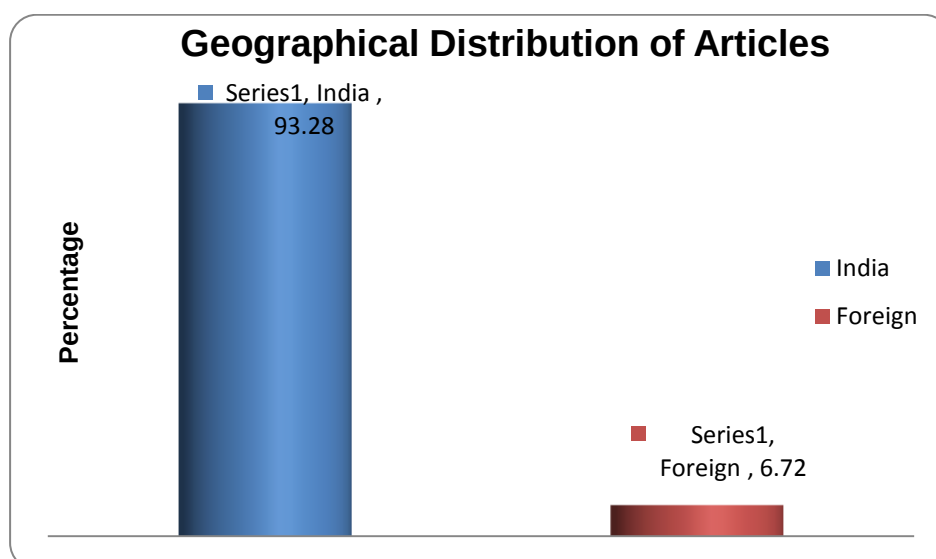


Table 7 show the institution of the contributors. These sectors have been grouped into five distinct categories for convenience of the study. The highest contributions were from universities with 868 (51.12%). This is followed by research institutions with 449 (26.44%), Colleges 216 (12.73%) and government departments 137 (8.07%). The remaining 28 articles (1.64%) were contributed by people in the societies.

Geographical Distribution of Articles

Table-8 Geographical Distribution of Articles

Name of the Country	No. of Articles	Percentage
India	1584	93.28
Foreign	114	6.72
Total	1698	100.00



The table 8 showed that most of the contributions were from India with 93.28 % and the rest 6.72% from foreign countries

Institution wise Productivity

Table-9 Institution wise productivity of Articles

Name of the Institution	No. of Articles	Percentage
National Institute of Oceanography	323	19.02
National Geographical Research Institute	268	15.78
Physical Research Laboratory	242	14.25
Baba Atomic Research Centre	218	12.83
Indian Agricultural Research Institute	183	10.77
Others	369	21.73
Total	1698	100.00

In all, there were various institutions involved in the research activity during the period. National Institute of Oceanography topped the list with 19.02 % publications, followed by National Geographical Research Institute with 15.78 % publications, Physical research laboratory with 14.25 % publications, Baba Atomic Research Centre with 12.83 % publications and Indian Agricultural Research Institute with 10.77 % publications.

Discussion of Findings

The total number of Internet/web resources cited were just 228 (0.52%) of the total citations. This shows that the impact of Internet/web resources citations on articles published in this journal was meagre. This result is in consonance with the findings of Harter (1998); Megnigbeto (2006); Chikate and Patil (2008); Olatokun and Makinde (2009). Many reasons could be adduced for this, it might be that authors of articles in this journal were yet to appreciate the importance of the indication of web resources reference or lacked basic information literacy skills needed to use the web resources. It is also possible that some web-resources were used and not properly or wrongly acknowledged, thereby shooting up citations from other sources. It is however, noteworthy to mention that the use of web-resources by authors in this journal was on the rise.

The study reveals that journal is the most cited sources cited by authors of articles in this journal as it accounted for 77.48% of the total citations. This finding concurs with the other previous studies which confirm that Journals were the most cited forms of materials used by researchers and academics Patterson (1945); Rieb (1993); William and Fletecher (2005); Olatokun and Makinde (2009) however, it is at variance with study of Ogunleye (1996), Nkiko and Adetoro (2007) that reported books were mostly cited by authors. The reason why journals are the most used material stem from the fact that journals carry most current research works which every scholar use to boost their works.

The outcome also shows that majority of the works cited was not recent; this could be due to limited accessibility of authors to recent works done on the field. This could also be linked to dearth of publications in Library and Information Science fields in this part of the world. The finding further reveals that most of the cited materials were

materials that were authored by single authors; hence it confirms the same preference of single authorship found by Momoh (1996) and Momoh (1997).

Summary and Conclusions

The paper attempted to highlight the citation pattern in the articles published in 120 issues of Current Science during 2006 to 2010. In all, there were 44,322 citations received from 1698 articles. The collaboration trend was towards multi authored papers as more than 60 % of publications were collaborative. More than 77 % of publications were journal articles indicate that scientists preferred journals over other channels of communication. More than 93 % of the contributions were from India. The highest citations 51.12 % were from university sector followed by research institutions. National Institute of Oceanography topped the list with 19.02 % publications, followed by National Geographical Research Institute with 15.78 % publications, Physical research laboratory with 14.25 % publications, Baba Atomic Research Centre with 12.83 % publications and Indian Agricultural Research Institute with 10.77 % publications. Current Science is the highly preferred journal for communication by the scientists.

In view of the findings, there is need for the journal to come out with an editorial policy that would encourage usage and citing of electronic resources by would be authors of articles in the journal. This is necessary because the ratio of electronic citation to print citation is too low. Secondly, despite the fact that the editorial instruction stipulates that only American Psychological Association (APA) style of referencing is acceptable, some references used by some authors did not follow this in the journal. The editorial team has to put an end to this since uniformity, status, consistency and integrity which is known with other reputable professional academic journals.

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Effect of Dispersion on the Performance of an Optical Link

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Abstract

With the evolution of optical technologies makes the transmission of Gbits information possible over considerable distance compared with conventional copper cable. Chromatic dispersion causes pulse broadening and it limits the transmission distance, bit rate and channel counts on an optical link. In this paper, effect of dispersion compensating fiber (DCF) technique on dispersion is studied. OPTSIM (Optical Simulator) simulation environment is used to create a model using single mode fiber (SMF) in the C band region of optical wavelength. Simulation results shows degradation in the bit error rate (BER) as the length increase and this is due to the effect of dispersion across the link. Within the limit of sensitivity and tolerable dispersion, the fiber length can be up to 20 km thereafter, the dispersion becomes higher thereby, it degrade the BER below the threshold value of 10^{-9} despite the receiver sensitivity of -27 dBm is kept constant. It was further observed that the eye opening for the 1 km fiber link is slightly bigger and finer than that for the 10 km link. The distortion in the signal is more pronounce when the fiber link distance is 30 km and become worst at 70 km. DCF was introduced to the fiber link to compensate for the dispersion. Simulation results indicate significant impact of the DCF on the link. This improves the transmission distance over 70 km at 10 Gbits/s data rate and decreases the BER at variable received power level. The measured BER of 1.7621×10^{-23} was obtained as compared with 1.31112×10^{-7} without DCF this indicates about 10^{16} order of magnitude in improvement of the BER.

Key Words

Optical Communication, Dispersion Compensation Fiber (DCF), Bit Error Rate (BER), OPTSIM, Single Mode Fiber (SMF)

Introduction

Communication system involves the transmission of information from one point to another, which is usually separated by distance. This distance could be few meters, kilometres or transoceanic distance. The information is carried on by electromagnetic carrier whose frequency varies from few megahertz to terahertz frequencies, depending on the nature of information and transmission distance intended to cover. Optical communication systems involve the use of high terahertz frequency ($\approx 100\text{THz}$) near the visible region of the electromagnetic spectrum and at times are called light wave systems. The transmission of digital signal started in the 1960s and then, electrical pulses were transmitted over copper cables. By the 1970s it was possible to transmit bit rates up to 140Mbit/s but the transmission distances were

limited to about 2 km by the attenuation and dispersion (pulse spreading) over the copper cables (Ball, 2009; Holzmann, 1995). So, equipment was needed every 2 km to regenerate the signal. For long distance/links such as city-to-city this meant that many regenerators were needed and the systems were expensive. Microwave radio transmission systems were an alternative but these also had limited repeater spacing and high capacity systems are expensive. Optical transmission over optical fibres was first proposed in 1966. Since 1980 such systems have been deployed worldwide and indeed revolutionize the technology behind telecommunication Govind (2002). Optical communication poses significant advantages ranging few includes enormous potential bandwidth, low attenuation e.g. 0.2dB/km for silica fibres at 1550nm and 0.3dB/km at 1300nm, compared with over 5dB/km for coaxial cables and low dispersion (spreading of pulse signal). The transmission of information via fiber could be achieved either by the use of single mode (monomode) fibres or multimode fibers. Single modes are designed to propagate a single mode at a given wavelength which makes it to be very good for high speed transmission as it's tends to avoids the intermodal dispersion which resulted when multiple modes propagates across a single fiber link. Today 100 Gbit/s can be transmitted over 100s of kilometres.

For efficient end-to-end and high capacity communication, recently technologies that would support the deployment of fiber to cabinet, office, building, and home and up to the node are available. These technologies are commonly referred at as FTTx. There are several opportunities for next generation optical access as described by Dirk et al, (2012), in their work, next generation optical access technologies have been evaluated based on operator's requirements, the study compare different access network architectures and concluded that fiber to the home (FTTH) technology will replace the traditional copper cable and subsequently, overcome the bandwidth limitations inherited from the old technologies. The next generation systems are expected to provide broadband access to users with bandwidth in excess of 100 Mb/s per residential home. In order to achieve high capacity, wavelength division multiplexing (WDM) is the most classic techniques in optical networks. WDM technology allows the capacity of a fiber by the multi wavelengths transmission increases to several dozens times, and even several hundred times by comparing with the single wavelength transmission capacity, Faruk (2010). In the long term connection at higher bit rates such as 400 Gbits/s is expected.

Dispersion is one of the major factors that affects the performance of optical link, as a pulse propagates along the optical fibre it spreads in time resulting in a decrease in peak power and total energy in its own bit period and spreading of power into adjacent bit periods this result to low BER and subsequently decrease the transmission distance. For over decades several dispersion management techniques have been proposed to address dispersion problems. In this work, we reviewed dispersion compensation techniques for SMF. The work further investigates using optical simulator (OPTSIM) the effects of dispersion on the performance of optical link. In the work, optical link was design using single mode fiber, dispersion compensation fiber was used to compensate the dispersion incurred on the fiber link. The paper is organize as follows; Section I provides the introduction; Section II presents various forms of SMF dispersion; Design, simulation analysis of the dispersion is presented in section III; Section IV provides techniques used to compensate for the dispersion and finally, Section V concludes the paper.

OPTICAL FIBRE DISPERSION

A. Single mode Fiber (SMF) Dispersion

In optical fibre communications systems, pulses of light representing digital ones are launched into the fibre. Each bit (a digital one or zero) is allocated to its own time slot or bit period, T , which is equal to the reciprocal of the bit rate (BR). As a pulse propagates along the optical fibre it spreads in time resulting in a decrease in peak power and total energy in its own bit period and spreading of power into adjacent bit periods. This is called inter symbol interference (ISI) as shown in Fig 1.

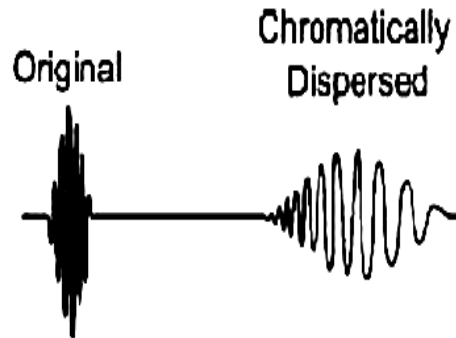


Figure.1. Optical Pulse Broadening caused by chromatic dispersion Danziger (2001).

The amount of spreading increases with distance and eventually this will lead to errors at the receiver output with ones being recorded in bit periods into which zeroes were transmitted and vice versa. There are two distinct sources of pulse spreading in single mode fibre, Ball, (2009) namely; material dispersion and waveguide dispersion and they are commonly referred to Chromatic dispersion Danziger (2001). Chromatic dispersion causes pulse broadening and it limits the transmission distance, bit rate and channel counts on an optical communication. Dispersion becomes more problematic when the optical pulses in transport fiber begin to overlap, pulse interference depends on dispersion value, and data bit rates, optical source spectral width and fiber length, the pulse interference depends on dispersion value, data bit rate, optical source spectral width and fiber length, Slavov (2012). Other forms of dispersion include; group velocity dispersion (GVD) and intra modal dispersion or simply the fiber dispersion.

B. SMF CHROMATIC DISPERSION

The main advantage of SMF in the design of high speed long transmission distance is that the intermodal dispersion is absent since it involves only one mode. However, the pulse broadening does not disappear altogether. Chromatic dispersion is another important factor that affects the performance of optical link. Chromatic dispersion of a SMF can be defined by;

$$D_{ch}(\lambda) = \frac{d\tau_g}{d\lambda} \quad (1)$$

And the dispersion slope $S(\lambda)$ is given by;

$$S(\lambda) = \frac{dD_{ch}}{d\lambda} \quad (2)$$

Therefore, from (1) and (2) it can be deduce that;

$$D_{ch} = \frac{S(\lambda)_0}{4} \left(\lambda_c - \frac{\lambda_0^4}{\lambda_c^3} \right) \quad (3)$$

Where, $D_{ch}(\lambda)$ is chromatic dispersion in ps/km.nm, λ_c is the laser center frequency, zero dispersion wave length λ_0 , zero dispersion slope $S(\lambda)_0$ and τ_g is the wave length dependent group delay. Once the transmission distance i.e. Fiber length (L) and the source spectral width ($\Delta\lambda$) are known then, the total dispersion could be evaluated as follows;

$$D = LD_{ch}\Delta\lambda \quad (4)$$

For SMF the chromatic dispersion coefficient D_{ch} is within the range (15.36-17.4)ps/kmnm for C band (1530-1565) nm of ITU recommendation G.694.2 of optical wavelength band. More detail could found in **Table 1**.

Table 1. Optical Wavelength Bands

<i>Original Band (O band)</i>	<i>1260-1360nm</i>
Extended band (E band)	1360-1460nm
Short band (S band)	1460-1530nm
Conventional band (C band)	1530-1565nm
Long band (L band)	1565-1625nm
Ultra long band (UL band)	1625-1675nm

Another important metric for examining the performance of optical link is dispersion penalty. Once the dispersion from (4) is known then, the dispersion penalty could be evaluated. Casimer (2006) gives an approximate relation to calculate the worse case dispersion penalty as a function of fiber length L and this is given by;

$$P_d = 5 * (\log(1 + 2\pi(BD\Delta\lambda)^2 L^2)) \quad (5)$$

The tolerable range of this penalty is 0.5 dB-1.0 dB.

The operating wavelength has impact on the performance of the fiber. Generally, there are three fiber attenuation windows, Ball (2010), these are;

- I. The 850nm wavelength 'window', this uses cheap components as source. But the fibre attenuation is relatively high at about 2dB/km. So this window is used normally for short distance low cost systems such as fibre LANs or equipment interconnects using multimode fibre.
- II. The 1300nm 'window', this has lower fibre attenuation (~0.4dB/km) as compared with 859 nm window. It is usually used with single mode fibre. The fibre material dispersion is very nearly zero at this wavelength in standard single mode fibre.

Table 2. Characteristics of commercial single mode and dispersion compensation fiber operating at 1550nm wavelength

Fiber Type	Attenuation and 1550nm (dB/km)	Dispersion at 1550 nm (Ps/km.nm)	Dispersion range in C band (1530-1565)nm	Dispersion Slope at 1550nm (Ps/km.nm ²)
SMF	0.22	16.8	15.36 to 17.4	0.057
DCF	0.65	-80	-72.2 to -84	-0.19

- III. The 1550nm ‘window’, this has the lowest fibre attenuation ($\sim 0.2\text{dB/km}$). Usually used with single mode fibre. Material dispersion typically 20ps/km.nm in standard SMF, but dispersion shifted fibres can be made with low dispersion at 1550nm. Preferred wavelength for long distance systems. The 1550 nm window is the most widely used as it aids long distance communication. Typical characteristic for commercial fiber available in the market today is shown in **Table 2**.

C. GROUP VELOCITY DISPERSION (GVD)

The group velocity which is associated with the fundamental mode depends on the frequency, as results, different spectral components of the pulse travels at slightly different group velocities and this gives rise to another dispersion called group velocity dispersion (GVD). Consider a SMF of length L . A spectral component with frequency ω would arrive at the output end of the fiber at a time delay $T = L/v_g$, where v_g is the group velocity, defined as in Bornand (1997).

$$v_g = \left(d\beta / d\omega \right)^{-1} \quad (6)$$

Given that $\beta = \bar{n}k_0 = \bar{n}\omega/c$ from (6), it can be prove that; $v_g = c/\bar{n}_g$, where $\bar{n}_g$ is the group index given by

$$\bar{n}_g = \bar{n} + \omega(d\bar{n}/d\omega) \quad (7)$$

The frequency dependency of the group velocity would leads to the pulse broadening. Assuming $\Delta\omega$ is the frequency spread, since it is determined by the range of wavelengths $\Delta\lambda$ emitted by the optical source, then $\Delta\omega$ could also be referred to as spectral width of the pulse. The extend of pulse broadening (ΔT) for a SMF with length L is govern by the relation in (8);

$$\begin{aligned} \Delta T &= \frac{dT}{d\omega} \Delta\omega = \frac{d}{d\omega} (L/v_g) \Delta\omega \\ &= L \frac{d^2\beta}{d\omega^2} \Delta\omega = L\beta_{\text{GVD}} \Delta\omega \end{aligned} \quad (8)$$

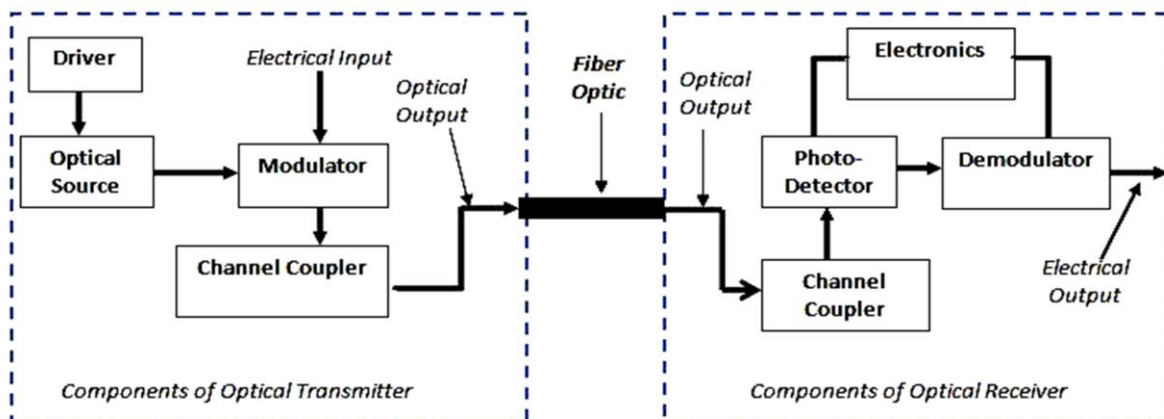


Figure 2. Optical fiber Communication Link design

Where, $\beta_{GVD} = d^2\beta/d\omega^2$ and β is given from (6) above. β_{GVD} is known as *group velocity dispersion (GVD)*. GVD determines how much an optical pulse would broaden on propagation inside the fiber, it is dependent on index of reflection of the fiber material and frequency spread as shown in (8). In some cases $\Delta\lambda$ is used in place of $\Delta\omega$, following the same step as in (8), the GVD could be evaluated using (9) once the dispersion of the fiber and wavelength of the source are known.

$$D = -\frac{2\pi}{\lambda^2} \beta_{GVD} \quad (9)$$

Optical Network Design and Simulation

A. Network Design

The design of an optical link involves many interrelated variables among the fiber, source and photo detector operating characteristics. In carrying out an optical fiber link analysis, several iterations with different device characteristics may be required before it is satisfactorily completed. The key requirements needed in analyzing a link are: desired transmission distance, data rate or channel bandwidth and bit error rate (BER) allowed. Figure 2 shows block diagram of optical link. This consists of optical transmitter, optical fiber as channel and optical receiver.

B. Simulation

Optical simulator (OPTSIM) is the simulation environment for this study. OPTSIM is software modelling tool design to simulate optical communication components and systems. It consist of wide range of components and models this include the sources, detectors, optical fibers, optical amplifiers, splitters and etc) that can be connected together to form a complete model. Also it contains data sources so that data at a selected bit rate can be transported over the system. Model or system can be monitored at any giving point within the system by inserting probe to measure the optical spectrum, optical power or the received electrical signal. Processing is provided by calculating the BER and Quality factor of the received signal. **Table 3** shows simulation parameters used.

Figure 4 shows the screenshot of OPTSIM simulation model develop, the main function of the optical transmitter components is to convert the input electrical signal into optical form that would be transported across the fiber.

Table 3. Simulation Parameters

Transmitter	NRZI	Low -2.5 High 2.5 Crossing point 50%	
	Laser diode	CW 1552.52438115nm, Lorentzian, CW power 5.0 dBm,	FWHM 30MHz Pulse width 0.1nm
	External modulator	Sin ² MZ Bandwidth 12GHz Excess loss 5.0 dB	Extension Ratio 30
	Data Rate	Pseudo random 10 Gbits/s	
	Optical attenuator	Variable	
	Channel	SMF	Loss of 0.2 dB/km and dispersion of 16 ps/km.nm.
Receiver	Photo Diode		
	Optical Filter	Raised Cosine (0.5)	Centre frequency 193.1 THz, Bandwidth 60GHz.
	Electrical Filter	Bessel filter 5 pole	8.0GHz
	Receiver Sensitivity	-27 dBm	Error Probability 1×10^{-9}

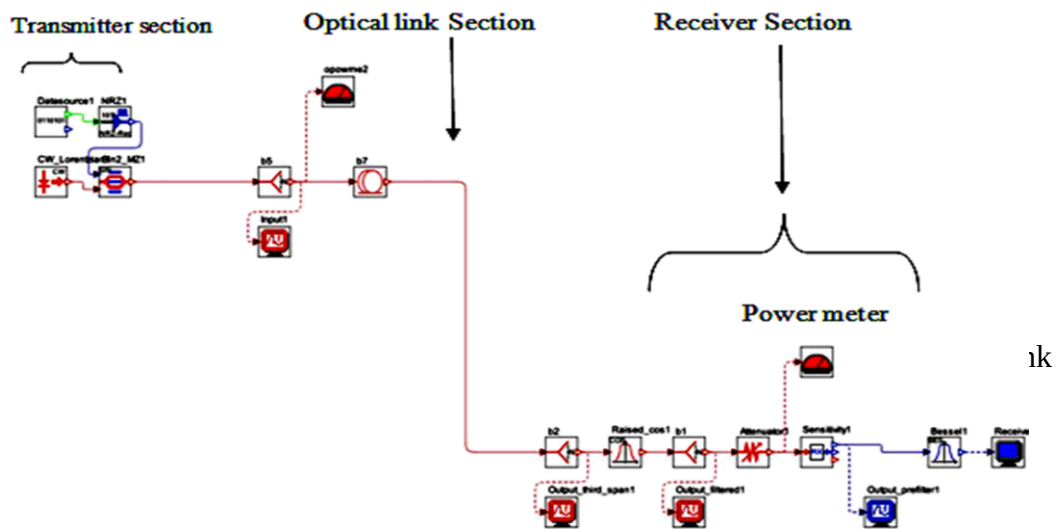
In this work, the optical transmitter components consist of the optical source i.e. laser diode and an external modulator. Laser diode was used as optical source due to its compatibility with optical fiber channel. The wavelength was set to 1552.52438115nm i.e. C band, the center wavelength (CW) power was set to 5.0dBm and the laser spectral width – (Full width half maximum (FWHM)) was 30.0MHz.

The optical signal is generated by modulating the optical carrier wave using external modulator. The modulator was switched on and off by the data to be transmitted. In this model pseudo random data was generated by the data source module at a gross bit rate of 9.953 (10Gbits/s) and this drives the external modulator through an electrical amplifier. In order to improve the efficiency of entrance of the signal onto the fiber, coupler was used to focuses the optical signal onto the entrance plane of the optical fiber. This coupler was also used at the receiving end. At the receiver section, the function of the receiver is to convert the optical output signal from the fiber back to its original electrical signal, components used in this work include;

A Notch band pass optical filter was used, it function as a band-stop filter or band-rejection filter which passes most frequencies unaltered, but attenuates those in a specific range to very low levels or in other words is a filter that passes all frequencies except those in a stop band cantered on a centre frequency. The filter centre frequency was 193.1 THz and has -3 dB two sided with bandwidth of 60 GHz. Optical attenuator, Bessel filters, the filter was a Low pass filter which passes frequencies within the specified range and rejects (attenuates) other

frequencies outside the range, a bandwidth of 8.0GHz was specified. More details on the simulation parameters could be found in **Table 3**.

Another important metric used was the receiver sensitivity. At the receiver the NRZ rectangular pulse shape was selected with a sensitivity of -27 dBm which is the minimum average optical power required to realize a BER of 1×10^{-9} Papannareddy (1999). At the optical section, a SMF was used of length 1 km with attenuation of 0.2 dB/km and dispersion of 16 ps/km.nm. The metric for the performance analysis is BER.



The experiment was repeated for the six different fibre lengths, by adjusting the attenuator values while keeping the received power constant, the transmitted power, received power and the BER was noted and recorded as shown in the **Table 4**.

Simulation Results

A. Bit Error Ratio (BER) measurement

In order to know the transmitted and received optical power, an optical power meter was inserted at both the fibre input and the fibre output as shown in the **Figure 3**, and the optical power out of the optical attenuator was monitored by simulating the system with different fiber lengths and attenuation values. An electrical scope was used to View Chart – Eye and the BER as shown in Figure 4. Also the optical power at the input and output of the fibre was monitored. **Figure 3** illustrates an OptSim schematic for simulating the single mode (SM) fiber transmission, this design is a simplified representation of SM of optical fiber.

The eye diagram is formed by superimposing the received data bits so that all combinations of transitions between ones and zeroes are superimposed on one time period. Noise will cause a variation in received binary levels. A digital receiver will set an amplitude threshold in the middle of the eye to minimise the probability of error. So the vertical opening indicates the *signal to noise ratio*. The centres of the horizontal opening indicate the amplitude threshold.

Observed the opening eye chart for the 1 km fiber link is slightly bigger and finer than that for the 10 km link. The distortion in the signal is more pronounce when the fiber link distance

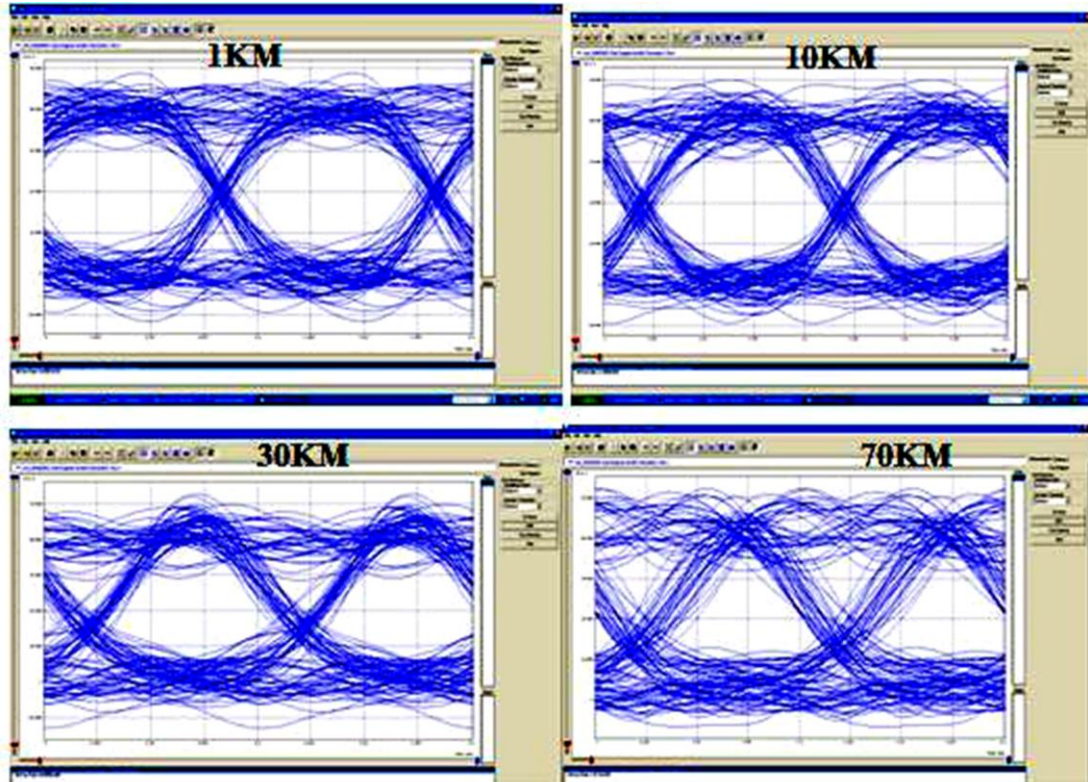


Figure 4: Screenshot showing the eye chart and BER for 1km, 10km,30km and 70 optical fiber link
is 30 km and become worst at 70 km. Figure 5 shows the variation of BER for all the simulation distance. It can be seen from Figure 5, the BER decrease with increase in fiber length despite the attenuation level is kept minimum.

Table 4: Showing the fiber length, attenuation, transmitted power, received power and their corresponding BER

Length of fibre	Attenuator (dB)	Transmit power (dBm)	Receive power (dBm)	BER
1km	4	-2.826	-26.962	8.4259×10^{-9}
10km	10	-3.032	-26.979	2.13848×10^{-9}
20km	14	-2.981	-26.998	3.44625×10^{-9}
30km	18	-3.009	-27.001	8.64955×10^{-8}
50km	20	-3.002	-27.007	4.7996×10^{-8}
70km	22	-2.998	-27.003	1.31112×10^{-7}
100km	23.8	-2.978	-26.997	0.000203634

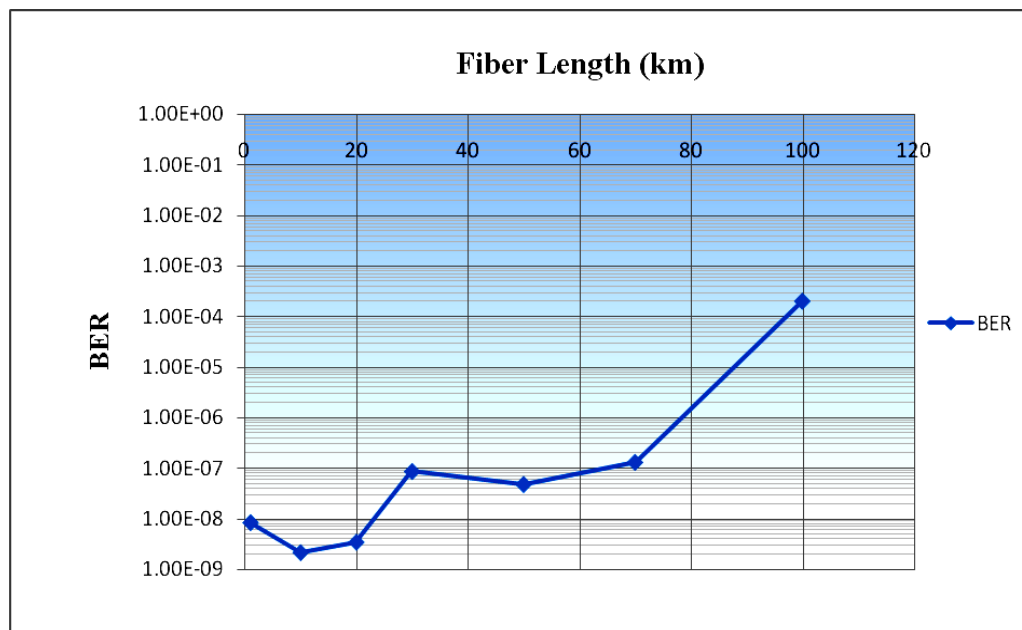


Figure 5: graph of BER against Length of SMF

There was degradation in BER as the length increase this is due to the effect of dispersion across the link and therefore the transmission will be limited. It can be conclude that, the higher the data rate or fiber length the higher the dispersion and subsequently the lower the BER. Within the limit of sensitivity and tolerable dispersion, the fiber length can be up to 20 km since the BER are $>10^{-9}$ see Table 4.

Thereafter, the dispersion effect become higher thereby, it degrades the BER below the threshold value of 10^{-9} despite the receiver sensitivity of -27 dBm is kept constant. Hence, to minimize errors and to achieve a specified error rate we must limit the amount of pulse spreading relative to the bit period.

DISPERSION COMPENSATION

From the above analysis, dispersion set the limit transmission distance to 20 km at a target BER. The penalty effect would be high at higher data rate from (5). While majority of today's networks still operate at 2.5 Gbit/s transmission speeds, despite the evidence of the possibility for transmitting at data rate of 100 Gbits/s. Though transition to 10 Gbit/s has been completed and deployed. In order to improve the transmission distance, the dispersion must be minimized. There are several dispersion compensation techniques described in (Danziger, 2001); Slavov, 2012; Knudsen, 2002; Liu, 2001). These techniques include the pre compensation scheme which tends to modify input pulse characteristics at the transmitter before it's launched to the fiber link, Prechirp and Novel coding techniques are common examples and post compensation techniques in which the dispersion is compensated electronically. Both

techniques have been proven not efficient enough for long haul systems since the dispersion must be compensated long the fiber link in a periodic manner. In recent years, another technique has been developed known as all optical, fiber based dispersion technique also known as dispersion compensating fiber (DCF), Nielsen (2000), Ramachandran (2001), & Gurkan (2012). This technique takes the advantage of compensating the dispersion by using special purpose fiber called dispersion compensating fiber (DCF). DCF has a negative coefficient which helps in balancing the dispersion along the fiber link to zero. See Table 2 for detail parameters of DCF. In fiber link design, the DCF may form part of the overall link or may be a lumped component on a drum situated with the receiver. The advantage of former is that, the dispersion will be compensated periodically after some interval of length while, this add to design complexity. The later is considerably easy to design but the major drawback is that, the dispersion may not be fully compensated as there would accumulate dispersion at the end of the link. Though looping the DCF with the receiver makes the design to look finer and may also reduce coupling loss. But the overall limitation of the technique is that it adds attenuation since more fiber is added. Therefore, the designer would have to make choice for tradeoff between compensating dispersion and addition of attenuation which would subsequently require more amplification. The DCF provides all optical fiber dispersion provides the input power is kept low to avoid nonlinear effect.

A. DISPERSION COMPENSATION IN SMF LINK

In this work, dispersion compensation fiber (DCF) which has a large dispersion with the opposite dispersion characteristic to the main transmission fibre see **Table 2** is employed to compensate for the chromatic dispersion and improve transmission over 70 km. The GVD is compensated by the use of narrow width laser of pulse width 0.1 nm. The average optical power is kept low to avoid nonlinear effect. In this model, Eqn (4) is used to calculate the total dispersion for 70 km link using the parameters stated in **Table 2**. To compensate for the dispersion, DCF need to be introduced. The task now is to evaluate the appropriate length of the DCF that would neutralize the chromatic dispersion without increasing the link attenuation that would require extra regeneration. In view of this, Eq. (10) Govind (2002) is used.

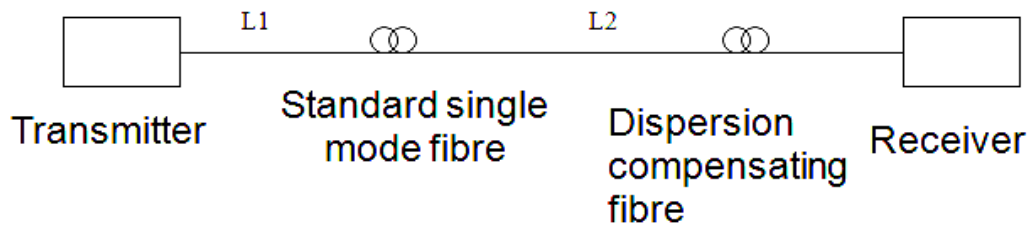


Figure 6. Dispersion Compensation

Consider the case where optical pulse propagate through two optical fibers segments i.e SMF and DCF with length and dispersion L_1 , L_2 and D_1 , D_2 respectively, the pulse envelope amplitude $A(L,t)$ is given in Govind (2002) as (10);

$$A(L,t) = \frac{1}{2\pi} \int_{-\infty}^{\infty} \hat{A}(0, \omega) \exp \left[\frac{i}{2} \omega^2 (\beta_{21} L_1 + \beta_{22} L_2) - i \omega t \right] d\omega \quad (10)$$

Where, $L=L_1+L_2$ and β_{2j} is the GVD parameter for the fiber segment of length L_j ($j=1, 2$) and is given in Eq. (9). The condition for perfect dispersion is that;

$$\beta_{21}L_1 + \beta_{22}L_2 = 0 \text{ or } D_1L_1 + D_2L_2 = 0 \quad (11)$$

Eq. (11) is used to compute for the DCF length to be 14 km. The attenuation caused by the DCF is 7.7 dB, therefore, the loss required to maintain both the input power and the output power or sensitivity is 2.3 dB.

By inserting a second length of fibre into the link as shown in Figure 9, in the attenuation box 20dB was selected, setup scan was used initially. This attenuation was varied from 20-25dB in 1dB step, were by variable scan was then selected.

By using the electrical scope the eye chart was viewed and the simulation was run for different attenuation settings of 70 km optical link. The BER of 4.6067E-9 for attenuation level of 22 dB was recorded for 70 km link in contrast to 1.31112×10^{-7} of the previous value. Therefore the dispersion compensation fiber has significant impact on dispersion by decreasing the BER as low as possible. For each run the BER was measured and recorded as shown in the **Table 5**.

Table 5. BER measurement after compensation for 70 km fiber link

Attention Db	BER	Power dBm
20	1.7621E-23	-24.978
21	1.0885E-12	-25.978
22	4.6067E-9	-26.978
23	9.7542E-7	-27.978
24	0.000159111	-28.978
25	0.000772127	-29.978

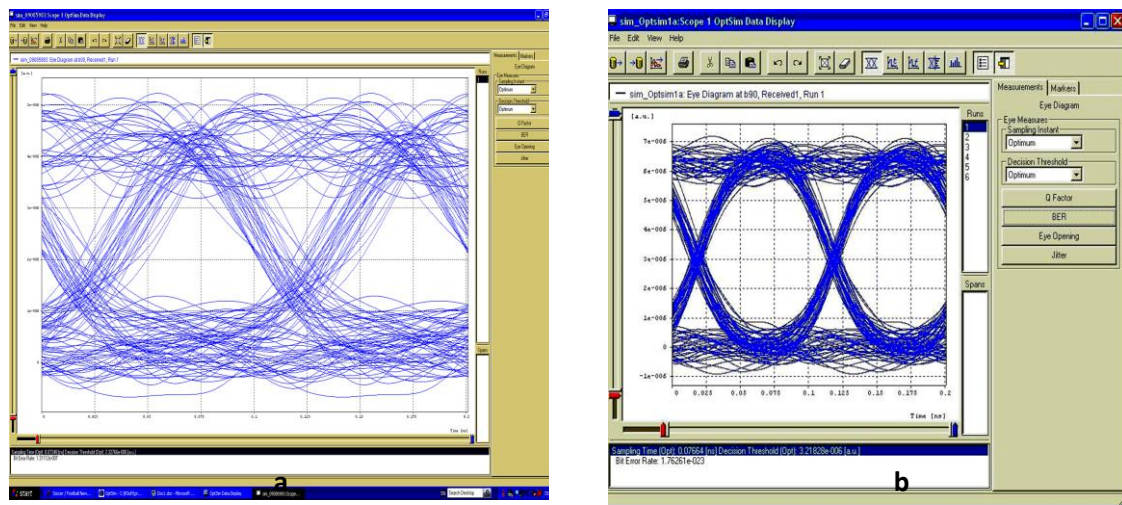


Figure 7: Screenshot of eye diagram for 70 km link. a) Before use of DCF. b) After use of DCF

Figure 7 shows screenshot of eye diagram for the 70 km link. (a) before the use of DCF, and (b) after introducing DCF in the link. In Fig 10a, it observed that, before compensating the dispersion, the vertical section of the eye diagram which indicate the eye opening is narrow and there is presence of scatter introduce by dispersion. No predefined point for the amplitude threshold as compared to Figure 7b when the dispersion is compensated. The figure shows fine defines shape without scatter, the amplitude threshold lie around $3e-006$.

CONCLUSIONS

The design of an optical link involves many interrelated variables among the fiber, source and photo detector operating characteristics. In carrying out an optical fiber link analysis, several iterations with different device characteristics may be required before it is satisfactorily completed. Dispersion is one of the major factors that affect the performance of an optical link. In this paper, effect of dispersion compensation fiber on dispersion was studied and it was found that there was a significant impact of DCF which improve transmission over 70 km and decrease the BER at variable received power level.

RECOMMENDATIONS

With the evolution of optical technologies makes the transmission of Gbits information possible over considerable distance compared with conventional copper cable. This work limits on compensating dispersion of 10 Gb/s SMF link. Today with the advent of multimedia services, the demand of high data rates is high. Higher data rate optical technologies that would transmit 400 Gbits/s are expected. Although, the WDM technologies allows the capacity of a fiber by the multi wavelengths transmission. The problem of dispersion is manifested as the data rate increases, therefore, to analyze the impact of DCF in compensating dispersion for high data rate

is considered as open to research. Compensating dispersion for 100 Gbits/s transmissions over long distance using DCF could be challenging.

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**Disaster Preparedness and Planning at the Learning Resource Center, School of
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Abstract

This paper reports the results of a research undertaken as part of an M Phil programme carried out to investigate disaster preparedness and planning at the Learning Resource Center (LRC), Moi University. The objectives of the study were (i) to identify the types of information materials available at the Learning Resource Center; (ii) to find out whether there is a disaster preparedness and planning policy in place; (iii) to establish the level of disaster preparedness; (iv) to find out the constraints experienced by the LRC staff in disaster preparedness and planning; (v) to propose solutions to the problems identified in the study. Interview and observation methods were used to collect data. The study concludes that the LRC should put in place a disaster preparedness policy and formally establish the disaster management committee.

Keywords: Disaster preparedness, Planning, learning resource center, School of medicine, Information.

Introduction

A disaster refers to a great misfortune or calamity that occurs suddenly. Otero and Marti (1994) defines disaster as a dramatic, sudden and unscheduled events that are accompanied by large losses of human life, suffering and affliction to a society or a significant part of it, and a temporary breakdown of prevailing lifelines and systems. According to the Encyclopedia of Information Sciences (2004), "A disaster is a sudden and a great misfortune, or mishap or a calamity". It can also be defined as an event, the timing of which is unexpected and the consequences seriously destructive. Disaster preparedness and planning is the art of putting measures in place prior to the occurrence of a disaster that would be undertaken should a disaster strike. It is a risk management exercise and although risks cannot be removed completely, many disasters that happen can be prevented or their effects reduced considerably.

According to the Kenya Red Cross Society draft policy on Disaster Management (2002), Disaster preparedness and planning can be defined as an organized analysis, planning, decision-making, and assignment of available resources to mitigate, prepare for, respond to and recover from the effects of disasters. It is therefore the policies, procedures and

arrangement that should be put in place by an organization in order to respond to disasters when they occur.

A decision to undertake disaster planning is the most important an information manager can make to protect information materials from loss and destruction. In most cases, disasters cannot be avoided but at least the impact can be reduced by preparedness and informed recovery so that records can be salvaged and restored. According to Kristi (2005), prior planning is necessary because this is the time when those involved can soberly determine what the potential effects of a disaster are, the appropriate responses to each kind of a crisis, who should be involved and what the repercussions for each action might be.

Disaster preparedness and planning should be an important part of sound library management practice. It keeps the staff always alert and makes them take such precautions as switching off power when not in use, closing water taps and having fire extinguishers in place and in good working condition. Furthermore, some library materials (both print and non-print) are rare and out of print and thus need to be safeguarded because they are irreplaceable. Also, disaster planning will help cut down on costs of replacing materials and repair of buildings. As a result, there is need to have disaster preparedness and planning put in place. This will help the library / information center to cope with emergencies, and deal with the damage that may be caused by such disasters.

The Learning Resource Centre at the School of Medicine, Moi University is the only medical library in the North Rift region of Kenya. It serves students at the Schools of Medicine and Public Health of Moi University, lecturers and health workers at the Moi Teaching and Referral Hospital. The center thus supports learning, teaching and research in the medical fields. It has very crucial information materials which includes books and journals both in print and electronic media and study models that are rare in nature. Should a disaster strike, it would be a great lose to the center clientele and the region as a whole. It is therefore paramount that the center should be prepared for disasters and be ready to handle any disaster if it occurs. However most of the information centers in Kenya do not have disaster preparedness and planning, and the staff working in these centers lack training in disaster control. In this case, if a disaster occurred, it would cause a serious problem to the information center. It is with this in mind that the study sought to investigate the extent to which the Learning Resource Center at Moi University School of Medicine was prepared to deal with disasters if they occurred.

Aim of the Study

This study aimed at investigating disaster preparedness and planning at the Learning Resource Center (LRC) at Moi University, School of Medicine with a view to suggesting how best the resource center can deal with disasters

Objectives of the Study

Specifically, the study sought to:

- Identify the types of information materials available at the Learning Resource Center;
- Find out whether there is a disaster preparedness and planning policy in place;
- Establish the level of disaster preparedness;
- Find out the constraints experienced by the LRC staff in disaster preparedness and planning;
- Propose solutions to the problems identified in the study.

Assumptions

The study assumed the following facts:

- That the Learning Resource Center at Moi University School of Medicine did not have a well-established disaster management plan ;
- Most members of the staff were not aware and were not trained on aspects of disaster management.

Significance of the study

A study on disaster preparedness and planning in libraries at Moi University has never been carried out. This study is significant in that it generated information on how well the library in question is prepared to mitigate disasters if they occur and how to prevent the same from happening. It should in the long run assist in the formulation of a disaster management policy for the library.

Review of previous studies

Local studies on disaster management have for a long time been rare. However, a recent study by Muthee (2008) reveals that disaster planning and preparedness in public libraries in Kenya is in a pathetic state. The study observed:

- That disaster planning and preparedness has not been developed or considered as a worthy venture by most University libraries;
- Although disaster programs have overwhelmingly been considered important, no effort has been made to put them in place. The research did not find any library which had a plan of action;
- That indifferent attitude and perception of the university and library management has been a major factor contributing to the poor state of disaster management;
- That the efforts and measures taken by university librarians towards disaster planning and preparedness are below average. He attributes this to the fact that the equipment available is not supported by adequate human skills and knowledge to handle and operate them.

Phases of disaster Management

Ellis (1999) divides disaster management into four phases, namely:

1. Disaster Preparedness;
2. Prevention;
3. Reaction;
4. Recovery.

Disaster preparedness

Ellis looks at the preparedness phase as being concerned with producing and documenting the disaster programme and keeping it up to date. He identifies the following issues as being very important in ensuring complete preparedness in case of disaster:

- a) Need to form a team of personnel who will be available in case disaster strikes. Their contacts should be taken;
- b) The most valuable material should be identified to salvage them first in case of a disaster. Their storage location should be indicated in the programme;
- c) The building plan should be available with details of power and water supply cut-off points, and drainage points;
- d) A list of equipment required during emergency should be made;
- e) The disaster programme should be tested and upgraded regularly;

According to Lyall (1996), effective disaster preparedness is based upon a comprehensive and a continuous assessment of vulnerabilities and risks. The assessment of risks will create

awareness of the most likely hazards their geographic spread, their magnitude and the elements at risk.

However, Lindblom and Karen (1999) believe that a prudent first step in disaster preparedness is to list geographic and climatic hazards and other risks that could jeopardize the building and collections. To them the environmental risks that surround the institution should be taken note of. Furthermore, chemical industries, shipping routes for hazardous materials, and adjacent construction projects all expose the institution to damage and should be noted. While all institutions are not vulnerable to all disasters, any event that is a real possibility should be covered under the emergency plan.

According to Fortson (1992), disaster preparedness can be summarized in the following two ways:

- Planning process;
- Production of a written plan.

Planning process

Fortson identifies the following activities in the planning process

- Assigning responsibility – in small organization, one person can be assigned the responsibility of organization and seeing the plan to completion. However in a big organization, it is essential that a small committee be formed. This committee should be composed of people with various backgrounds for instance conservation experts, building maintenance, fire experts, and the police.
- Educate the committee – it is important to provide the committee with some background information on disaster management. A consultant may be invited to take on the subject and sensitize members on various aspects of disaster management.
- Define the scope of the committee – this is important in terms of focusing its efforts. Furthermore, a time frame should be given within which the committee should complete its work.
- Conducting material survey – this involves finding out the different types of materials in the information center in such a way that emphasis is laid on the materials that support the goals and aspirations of the institution. This will assist in prioritizing the materials to be salvaged in case of a disaster.
- Determine the potential hazards likely to strike – this can be done by conducting a hazard survey. Emphasis should be placed on internal and external hazards.

Production of a written plan

Patkus (2003) observed that an effective disaster plan should be comprehensive, simple, and flexible. According to Patkus, the plan needs to address all types of emergencies and disasters that an institution is likely to face. It should include plans for both immediate response and long-term salvage and recovery efforts. She argues that people faced with a disaster often have trouble thinking clearly; so concise instructions and training are critical to the success of the plan. The key is to write in a clear, simple style without sacrificing comprehensiveness. The following should be emphasized when writing the plan:

- The plan should have a table of contents that will direct users to obtain relevant information within a short time;
- It should list emergency procedures to be followed when a disaster occurs. This is important in that it will reduce panic and the staff on the ground can help combat an event that may turn disastrous;
- It should contain names of staff to be called upon including their telephone numbers. This will reduce the time taken to react to a given disaster as the right people can easily be reached;

- It should identify and list areas of the building where special materials are kept. This is to assist in providing priority decision in the event of a disaster;
- It should contain building plans and the location for power switches and water supply;
- It should list emergency equipment and supplies which can be used in the event of a disaster and their location within the building.

Disaster protection / prevention

According to Bowden et al., (2001), the prevention phase encompasses the actions taken to minimize the risks posed by possible occurrences such as unauthorized access, fire and floods. This can be achieved through:

- a) Appropriate storage equipment;
- b) Making security copies of important material;
- c) Ensuring the security of the building by carrying out building inspections;
- d) Regular instruction to the staff on fire prevention procedures and maintenance of fire extinguishing equipment;
- e) Storing valuable records in upper shelves or upper floors to avoid water damage.

Generally, these are measures put in place in order to prevent disasters from occurring. It is generally considered that disaster recovery requires a lot of resources hence the need for taking into account prevention and protection measures.

Reaction phase

The third phase is concerned with reaction. This implies the steps to take when disaster strikes. Patkus (2001) identifies the following steps in reaction to any given disaster.

- a) Raise an alarm and assemble personnel.
- b) Ensure the disaster site is safe to enter.
- c) Damaged material should be removed. A treatment area can be set up, e.g. a tent; to carry out minor treatment like air-drying slightly wet materials. Mould can easily affect wet material. Therefore, they need urgent drying to ensure protection from mould.

Mathews and Feather (2003), categorize this phase into the following:

- Immediate actions relating to who needs to be informed and actions taken by whoever discovers the incident;
- Short-term actions taken by the conservators and building facilities personnel;
- Long-term actions relating to decisions about priorities, treatments, drying out, freezing; collaborative approaches involving collection managers, conservators and building facilities personnel.

Disaster recovery

The fourth and final stage in disaster preparedness involves recovery. According to the Kenya Red Cross Society draft policy on Disaster Management (2002), the recovery plan involves establishing and carrying out a programme to restore the damaged materials. Depending on the nature of the disaster, the recovery process may be quick or it may require long-term planning and substantial resources to rehabilitate the building and the records. At the recovery phase, decisions on what materials to restore first are very crucial. Since disaster recovery is a post emergency phase, it entails activities that will help an information center to return to normalcy. Ellis (1999) suggests three ways that an information center can recover from a disaster:

Recovering the collection – this involves deciding on the kind of collection to be repaired, for instance, the materials that are rare and unique. It also involves considering alternatives for recovering the collection. It may be decided that some materials be discarded especially

those that are beyond repair. Generally, this phase involves prioritizing the materials to be salvaged

Replacing the collection with new materials – this is applicable in a library set up especially in a situation where it may be costly to salvage the materials as compared to purchasing of new materials

Replacing with another media – Microfilming may be done to retain the information held in a media that has been damaged badly.

Research Methods

The study adopted interview and observation as methods for data collection. The Interview method was used to collect data from the librarian and his staff. The interviews were in-depth. Observation was used to collect data relating to observable disaster management activities. Consequently, interview schedule and observation checklist were prepared for data collection.

Key Findings of the Study

The study came up with findings that enabled the researcher to draw conclusions and to suggests recommendations that if, the center and by extension any other information center would put in place, would enhance their level of disaster preparedness and planning.

Disaster management policy

The resource center did not have a written disaster management policy. The librarian in charge however maintained that there was a policy even though it was informal. His staff including the ancillary staff was of the opinion that the resource center did not have a disaster management policy. Asked what they would do in case a disaster strikes, the senior and the middle level staff said they would first alert everyone else in the building, find out the cause and intensity of the disaster then seek help from the relevant groups of people. They noted, for instance, that if fire strikes, they would instruct their own security to use the equipment in place like fire extinguishers while they alert the municipal fire-fighting department. The ancillary staff that was interviewed, on the other hand, indicated that the first thing they would do was to inform the librarian in charge of the impending disaster then do whatever they can to mitigate the problem. From the above information, it can be deduced that though there is no policy and clear guidelines on what to do in case of a disaster, at least every staff has an idea of disaster management. This would of necessity be improved if the centre formulated a policy spelling out every step that should be followed. Beth (2003) asserts that in times of disasters, people are normally a confused lot and may even forget what they usually know. She observes that every information center should have a policy with proper guidelines.

Disaster management committee

Disaster management committees play a very crucial role in times of disaster. They should be the first to be notified of the disaster and are the people to do everything to ensure that the disaster does not spread to all other areas of the building. All the ancillary staff interviewed were not aware that there was any kind of a disaster management committee. However one of the middle level staff interviewed indicated that there was a committee though very informal in nature. This was in agreement with the two senior staff who also felt there was some kind of an informal committee. Asked to comment on the membership of the committee, one senior staff interviewed pointed out that the membership comprised all the senior and middle level staff and all the security staff but excluded other ancillary staff like cleaners. Other staff members were not sure of the membership of the committee.

On the role of the committee, it was felt that the committee should strategize on what should be done in the face of a disaster. They pointed out that it is the duty of the committee to draft a disaster management policy, something they said had not been done since the committee had not been formalized. The committee should also identify the persons to be contacted in case of a disaster and provide their contacts.

From the above, it is clear that a disaster management committee at the Moi University Resource Center needs to be formally established.

Staff Awareness of Disaster Management Plan

Members of staff were asked to comment on their awareness of disaster management. The senior staff indicated they were aware of disaster management. Much of their awareness was derived from their training rather than their work experience. The middle level staff however indicated a vague understanding of disaster management. Although they were aware of the term disaster management, on being asked what it entails, they were not able to do so. They also indicated that they have not been trained at any one point on disaster management.

However, the security personnel who form a major part of the ancillary staff were aware of disaster management and especially so, fire fighting. They said that on completion of the new building they were trained on how to fight fires. They were also instructed how to use fire-fighting equipment. This group of staff demonstrated a better understanding of disaster management though narrowed down to fire fighting and excluded combating of other types of disasters.

The librarian in charge was asked whether there were plans underway to train more members of staff on disaster management. He observed that the major hindrance was lack of funds. According to him, if funds were made available, all members of staff would be trained on disaster management.

Basing on the above, it can be concluded that staff awareness was below average and more effort needed to be put in place to improve on this aspect of disaster management.

Disaster prevention

Disaster prevention is a less costly aspect of disaster management compared to disaster recovery. Every information center should therefore spend better part of their resources and time preventing the disaster to avoid complication brought about by recovery exercises.

It was observed that the materials used to construct the shelves comprised fire proof metal that prevented fire from spreading in case a smaller area caught fire. The shelves were raised four inches from the ground so that in case of floods, materials can be evacuated before being damaged by water. It was also noted that there were no water taps in all the storage areas. Most of the books were on the first floor where there were no water taps. The short loan section and technical area were situated on the ground floor but all water taps were situated in bathrooms that were located behind the building. It was also observed that the storage areas were kept neat and clean. The books were well dusted and floor clean during the time the observation was done. This aspect plays an important part in preventing disasters in that insects and rodents are not likely to be attracted into these rooms. This is because dirty environment would be an attraction to rodents and pests that may harm information materials.

Another observation made was that within the building, there are fire exit routes that assist in evacuation of materials in case fire strikes. Fire exit routes are also important in saving human life in that people have easier way out of the building to avoid crowding at the main

entrance. Additionally, the fire extinguishers located at strategic points can help combat small fires before they spread. In total, there were 10 fire extinguishers located in various places.

A final observation made relates to addressing the security of the materials. It was observed that clients left their belongings like bags and coats at the entrance. This minimized chances of clients deliberately stealing the center materials. In addition, there was always a security officer at the entrance who searched the clients to ensure that they leave only with materials that have been issued to them and none other. This exercise was done because the library lacked an automatic security alarm at the entrance. Finally, there was always one entrance/exit open during the day. This also helps minimize theft.

To complement the above observations, the members of staff interviewed were asked how they prevented disasters. Their response was that house keeping played a key role because it ensured that the resource center was kept clean and information materials filed neatly. They also indicated that there was equipment put in place that would be used to combat fire in case it occurred. Asked how often the roofs and electrical appliances were being monitored, the response was that since the building was relatively new, the roof and the appliance had never been checked. It was also noted that all the rooms did not have curtains including the Internet room. Curtains filter the amount of sunlight that reaches the storage areas. This is an important factor especially to electronic materials such as films which are usually destroyed by excessive heat and temperatures. The lack of curtains meant that the materials were exposed to possible hazards that may lead to catastrophic eventualities.

From the foregoing discussion, disaster prevention as an aspect of disaster management, takes prominence at the learning and resource center. There were however, some practices that form part of disaster prevention that were prominently missing at the center.

Equipment put in place

The equipment that was put in place for disaster management comprised the fire extinguishers mentioned earlier. They were 10 in number and placed at strategic positions in the Resource Center. The equipment was in good working condition. The extinguishers had however not been used since they were installed. Two of the staff interviewed noted that the equipment had once been tested and found to be in good working condition.

From the type of equipment that the center had put in place, it can be deduced that the only kind of disaster they visualized was fire. This is because the only equipment available was that which could help in the fight against fire.

Challenges the center faced in relation to disaster management.

In the management of disasters, the Learning Resource Center experienced some challenges: One major challenge was the lack of a policy document. Usually, a policy document is an engine that drives any practice in an institution. The lack of it is a major drawback in the success of any given exercise. The librarian in charge of the center noted that there is a lack of a policy document in as far as disaster management is concerned even in the mother library, the Margaret Thatcher Library. This, to him, is a challenge in that they are forced to be informal in their approach and consequently reducing the efficiency of their operations.

Secondly, there was lack of a formal disaster management committee. As discussed elsewhere, a disaster management committee is important because they are the people vested with the responsibility of disaster management ranging from drawing up of a disaster

management plan to the implementation of the plan. At the Learning Resource Center, a formal committee is non-existent. Consequently, there was no written disaster plan and therefore, the little the staff had on disaster management was informal. In the event of a disaster, this knowledge may be of little use basing on the confusion that usually arises with disasters.

Moreover, most of the center staff members were unqualified, only five out of the 24 members of staff were professional librarians. From the interviews, the professional members of staff were well acquainted with disaster management than the others were. Lack of enough qualified staff therefore was a challenge in the management of disasters.

Lastly, was the issue of inadequate funding. Like most information centers in the developing world, the Moi University Learning Resource Center did not have enough funds. The little availed to them was just enough to sustain the day- to- day running of the center. This left the center with no funds to provide the much-needed training to their staff, purchase equipment like electric alarms and even to organize workshops on disaster management.

Conclusions

The conspicuous absence of a disaster preparedness and planning policy means that the center was ill-prepared to handle disasters should they strike. The best way to deal with disasters is to be prepared so that should they strike, they can be dealt with smoothly and efficiently.

The Learning Resource Centre lacked a formal disaster management committee. It is this team of persons that is vested with the responsibility of handling disasters. The team also should be responsible for the formulation of the policy as discussed above. The study concluded that since this had not been put in place, then the level of disaster preparedness was low.

Staff awareness of disaster management at the center was quite below average. This was attributed to the fact that majority of them demonstrated a vague understanding of disaster management. With this level of awareness, then, the level of disaster preparedness and planning also goes down. With this in mind, coupled with glaring shortcomings that the study unearthed, the researcher concluded that the level of disaster preparedness at the LRC was wanting. The researcher believed that if the recommendations given at the end of the study were adopted by the Learning Resource Center staff, the management of disasters at the center would greatly be improved.

Recommendations

In the light of the above study's findings and conclusions, the following recommendations were made:

1. Establishment of a formal disaster management committee

This study recommends the establishment of a formal disaster management committee.

Rationale

The success of a disaster management in any given institution depends on the availability of a disaster management committee. It is the committee that will ensure that there is a disaster management plan and that the plan is implemented. This committee should be well versed with background information on disaster management.

Functions of the committee

Being an important prerequisite of disaster management, the following should be the functions of a disaster management committee.

- Carry out a collection survey to document the information materials in the collection
- The survey will also help the committee to set out priorities for salvage in case of a disaster. In so doing, the emphasis should be placed on materials that are core to meeting the goals and aspirations of the center.
- Conducting a hazards survey. This involves looking around for the potential hazards that might cause a disaster. In this case, both internal and external hazards should be looked into.
- Preparing a disaster management plan
- Ensuring that the plan is implemented especially those issues that deal with prevention of disasters.
- Ensuring that the necessary tools and equipment required for the mitigation of disasters are available and located in strategic points within the building.

The committee should comprise of people with diverse backgrounds. Within the committee, there should be librarians, security, cleaners, building caretaker (maintenance), and fire experts. It should also be possible to involve outsiders like the police in the committee.

2. Preparation of policy document

Policy guidelines are important for the smooth running of operations within any given institution. It is therefore essential for the Learning Resource Center to come up with policy document. In the policy document, guidelines on what to do in the event that a disaster occurs should be clearly outlined.

3. Preparation of a disaster management plan

This implies the documentation of all procedures that needs to be carried out in the event of a disaster and all the people that need to be involved. In essence, a disaster management plan is a driving force in the management of disasters. It is important that any institution thinking about disaster management should have it at hand. For a successful preparation of a disaster management plan, the following needs to be considered.

- It should have a table of contents that will direct users of the plan get relevant information within a short time.
- It should list emergency procedures to be followed when a disaster occurs. This is important in that it will reduce panic and the staff on the ground can help combat an event that may turn disastrous.
- It should contain names of staff to be contacted including their telephone numbers. This will reduce the time taken to react to a given disaster in that the right people can easily be reached.
- It should identify and list areas of the building where special materials are kept. This is to assist in making priority decision in the event of a disaster.
- It should contain building plans and the location of power switches and water supply.
- It should list emergency equipment and supplies, which can be used in the event of a disaster and their location within the building

4. Train all the members of staff in disaster management

The element of training among the staff is necessary for the success of disaster management. In this respect, all members of staff irrespective of their cadre needs to have some basic understanding of disasters and how they can be managed. This can best be done by organizing periodic workshops on disaster management and possibly inviting consultants in this field to talk to members of staff and even the users.

5. Solicit for funds

Disaster management has some cost implications right from the preparation stage to the implementation phase. Most information centers including the Moi University Learning

Resource Center do not have adequate funding. It is therefore upon the librarian in charge to take the initiative and solicit for funds either from the parent institution or from income generating activities to meet the costs to be incurred in disaster management.

6. Purchase all the necessary tools and equipment

As mentioned elsewhere, all the necessary tools and equipment needs to be put in place. These need to be purchased.

7. Practice fire drills from time to time

Fire is usually the commonest disaster facing an information center. Fire drills should be practiced regularly to sensitize the staff and even the users on what is expected of them at any one time.

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CULTURAL IMPERIALISM THESIS AND NIGERIAN YOUTHS EXPOSURE TO FOREIGN TELEVISION PROGRAMMES

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ABSTRACT

This study investigates Nigerian youths' exposure to foreign television programmes with the aim of validating or invalidating the major proposition of the cultural imperialism thesis. It determines the extent of the influence of the cumulative exposure of Nigerian youths to foreign television programmes on the cultural patterns or ways of life of the youths. To achieve its objectives, the study adopted a triangulation of survey and Focus Group Discussions (FGDs). The study found that Nigerian youths are heavily exposed to foreign television programmes on satellite television, and that there is a significant correlation between their exposure to the programmes and their adoption of foreign attitudes and habits at the detriment of their indigenous cultural orientations. It, therefore, concludes that in spite of the criticism of cultural imperialism thesis by some scholars, its assumptions are still a reality among Nigerian youths.

KEYWORDS: Cultural imperialism, Foreign television programmes, Cultural triangulation, Cultural Homogenization

Introduction

Since the inception of satellite broadcasting in Nigeria, foreign television entertainment programmes constituted the largest proportion of most private television stations and, particularly, satellite television companies. The potentials of television to define and shape the cultural reality of a group of people are already established as incontestably great (McQuail, 2005). Television is expected to influence social values positively, and thereby, improve and strengthen the social, cultural, economic and political structures of a nation. Perhaps that was why the National Broadcasting Commission of Nigeria was established on the foundation of some cultural objectives that mandated the Nigerian television industry to "seek, identify and preserve Nigerian diverse cultures... and to select critically positive aspect of foreign culture for the purpose of enriching Nigerian culture" (NBC Codes, 1993, p.5). However, cultural imperialists have argued that the domination of foreign media and preponderance of foreign programmes have over the years hindered the cultural development of many developing nations like Nigeria. As proponents of cultural imperialism also argued, the cultural identity of the people in the developing countries has always been endangered by the overpowering influence of foreign television programmes to which the people are deeply exposed. The assumption of the cultural imperialism thesis, therefore, is that when the people in the developing nations are constantly exposed to foreign television programmes that dominated their television systems, the social cultural tastes of foreign countries are likely to supplant their cultural value so much that many of them will imitate foreign ways of dressing, eating, speaking, dancing and behaving. Consequently, the fear emanating from the cultural imperialism thesis is that foreign television programmes that have over the years dominated in the Nigerian television industry present images and styles of life that are not compatible

with the cultural values of the country, which could adversely influence Nigerian youths. This fear about influence has become much more intense with the popularity and accessibility to satellite television through DSTV, the defunct HITV and STAR TIMES by the Nigerian youths.

Meanwhile, opponents of cultural imperialism thesis have argued on the basis of the propositions of new revisionism and active audience perspectives that foreign programmes could not influence, erode or endanger indigenous cultural values of the people that are exposed to them. This is because individual audiences have power to resist, re-appropriate or even reject entirely their meanings.

Problem Statement

Although, empirical studies that had supported cultural imperialism thesis in relation to Nigerian audience are many, the findings of most of them are outdated and did not provide adequate or complete description of the thesis. Besides, the findings of such studies are already challenged by the new thinking about the thesis that valorizes the active audience perspectives. Thus, there is a need to revisit and reassess cultural imperialism thesis through a much more detailed and well planned study that will not only establish the accurate level of youth exposure to foreign television programmes in Nigeria, but also its real impact on the cultural habits, values, attitudes and behaviours of Nigerian youths with the intention of closing the gap in the description of cultural imperialism thesis in Nigeria. Therefore, this study investigates Nigerian youths' exposure to foreign television with the main aim of validating or invalidating the major proposition of the cultural imperialism thesis. It thus examines the extent of the influence of the cumulative exposure of Nigerian youths to foreign television programmes on the cultural patterns or ways of life of the youths

Objectives of the study

The main objective of this research was to establish whether or not there is a significant correlation between exposure to foreign television programmes through satellite channels and adoption of foreign behaviours among Nigerian youths. Specifically, this study examined relationship between exposure to foreign television programmes and cultural imperialism in terms of erosion or breakdown of cultural identities and values of the audiences of such programmes in the developing nations.

Research Questions

To achieve the above listed objectives, the following research questions were answered:

- Does the youths' exposure to foreign television programmes influence their cultural habits, attitudes, values and behaviours?
- How do the youths perceive the influence of their exposure to foreign television programmes on their cultural orientations?
- Is there any significant correlation between the cumulative exposure of Nigerian youths' exposure to foreign television programmes and cultural imperialism in terms of youths' adoption of foreign behaviours?
- Do the demographic variables such as sex and age of the respondents account for any differences in the nature of influences or perception of the influences of foreign television programmes on Nigerian youths?

Hypotheses

The null hypotheses listed below were tested for acceptance or rejection in order to validate or invalidate the main assumption of the cultural imperialism thesis.

- There is no significant correlation between exposure of the Nigerian youths to foreign television programmes and cultural imperialism thesis in terms of youths' adoption of foreign attitudes, habits and behaviours.
- There is no significant difference in the nature of the influence or perception of the influence of foreign television programmes among the Nigerian youths in terms of the differences in their sex and age.

Literature Review

Schiller (1969) initiated the debate on cultural imperialism with his series of studies on international communication. The studies focused on the general analysis of the links between US centers of corporate power and its military for the purpose of extending her control over international communication and consolidating her as the main global dominant state. Thus, Schiller initiated with his thorough analysis the idea that the US in particular had a project of imperialist control of the world, which was pursued vigorously through a network of her economies, military, finances and media. As he claimed, "what lends sophistication to the still-youthful American structure is its dependence on a marriage of economies and electronics, which substitutes in part, although not entirely, for the earlier, blood and iron foundations of more primitive conquerors" (Schiller, 1970, p.5). This marriage of economies, military and the media, particularly electronic media, is manifested, according to Schiller, in US government propaganda initiatives, military broadcasting facilities, development of satellite communications, foreign policy objectives and programme exports. As Schiller observed, each of these elements of the linkages or networks aimed at achieving total and imperialist domination of the world.

Against the above background, Schiller developed the concept of cultural imperialism by defining it as: "the sum of the processes by which a society is brought into the modern world system and how the dominating stratum is attracted, pressured, forced, and sometimes bribed into shaping social institutions to correspond to, or even promote, the values and structures of the dominating center of the system" (Schiller, 1996, p.9). As is reflected in the above definition, some other scholars that worked on Schiller's thesis had suggested that his idea should rather be described as 'structural domination paradigm' because it seemed to be relatively focused on narrow issues (Sparks, 2007, p.95). Perhaps that was why later scholars incorporated the concept of media imperialism to enhance further understanding of the position developed by Schiller. As Sparks (2007, p.95) explained, this incorporation became necessary because "the structural domination of the media systems, which might be considered media imperialism proper, was central to the introduction of 'alien' patterns of thought, behavior and culture, which is considered cultural imperialism proper". Thus, cultural imperialism is generally used in broader sense than the concept of media imperialism. While media imperialism is much concerned with the domination of some particular contents and structures of media, cultural imperialism is concerned with broader issues of cultural invasions that occur not only as a result of the domination of some particular media contents and structures but also as a result of a range of other forms of cultural flows, although Schiller emphasized issues concerning media contents. Nevertheless, Boyd-Barrett used media imperialism as an inclusive concept to establish both structural domination and resultant cultural invasion and domination. He, therefore, defined media imperialism as: "the process whereby ownership, structure, distribution or content of the media in any country are singly or together subject to substantial external pressures from the media interests of any other country or countries without proportionate reciprocation of influence by the country affected...The absence of reciprocation of media influence

combines both the element of cultural invasion by another power and the element of imbalance of power resources between the countries concerned. The two elements of invasion and imbalance of power resources justify the term ‘imperialism’ (Boyd-Barrett, 1979, p.117-118).

Essentially, there are two major suggestions in Boyd-Barrett’s definition. The two suggestions could be said to have been derived from Schiller’s work and definition of cultural imperialism. First, a few transnational corporations (TNCs) that are owned by the Western countries, particularly the United States, dominate and control global communication with their operations spread across many countries in the world and across various forms of media businesses- production, distribution. Second, the concentration of media corporations in the West inevitably brings about unequal, asymmetric and one-way flow of communication. In other words, there is imbalance in the flow of media products between the South and the North.

The second part of the cultural imperialism thesis has been the main element of cultural imperialism and was for many decades the crux of the debate on the nature of international communication. As Tunstall, (1977, p.57) had put it, the main thesis of cultural imperialism is that “authentic traditional and local culture in many parts of the world is being battered out of existence by the indiscriminate dumping of large quantities of slick commercial and media products mainly from the US”. Sparks (2007) also reasoned along this line by stating that “the indispensable truth of the theory of cultural imperialism was its recognition that the global circulation of media products was dominated by a few rich countries”. This domination, according to Sparks (2007), “imposed important limitations upon the ability of the poor of the world to express themselves and their experiences”. Thus, cultural imperialism holds that because few elite in the North, in collaboration with their governments, control and dominate global media, their ideas of the world that they transmit through the media products they import to all parts of the world homogenize the worldview of almost everyone that is exposed to their ideas.

The central criticism of cultural imperialism that this study intends to investigate revolves around its assumptions that foreign cultural products and programmes have immediate, rapid and uniform effects of indoctrinating the minds of their audience to accept foreign values and jettison their own traditional values. New revisionists and cultural studies scholars have provided both theoretical and empirical evidence to argue against this assumption (Fiske, 1989, Morley, 1989). Based on the postulations of cultural studies and new revisionism that are implicated on active audience perspective, there has been a shift away from seeing the mass media and their products as the instruments of power and the site of domination to seeing them as a site of negotiation in which media audiences have power to determine the meanings they want to derive from media consumption. Therefore, critics of media imperialism have argued that its propositions on the effect of exposure to foreign programmes and products are manifestly inadequate because they don’t recognize the agency and power of active audience in interpreting media texts differently from the meanings intended or embedded in them.

Methodology

This study adopted a triangulation of survey and in-depth group interview known as Focus Group Discussions (FGDs) to achieve its objectives. Essentially, survey was adopted to

investigate and assess the level of exposure to foreign television programmes and its influence on the way of life of the Nigerian youths. The method was to enable a descriptive understanding of the types of foreign television programmes the youths were exposed to, the frequency at which they were exposed to the programmes, the channels through which they were exposed to the programmes, with a view to having an idea about the cumulative influence of such exposure on the youths' ways of life so as to establish the validity of the cultural imperialism thesis. Survey method, therefore, facilitated the testing of the null hypotheses that aimed at validating or invalidating the assumptions of the cultural imperialism thesis.

However, as a qualitative strategy, survey method would only provide an array of numbers that constitute the quantification derived from a set of structured questions to which fixed answers were provided. Therefore, it could not provide in-depth and contextual analysis or opinions about the variables this study intended to measure or the relationship it intended to establish. This is the reason why the study complimented survey method with Focus Group Discussion with the main aim of getting deeper, diverse, richer and contextualized answers in respect of the influence of the Nigerian youths' exposure to foreign television programmes on the youths' cultural habits, attitudes, values and behaviours. So, the usefulness of qualitative strategy like the Focus Group Discussions is to discover other perspectives or viewpoints on events other than those of the person initiating a survey method. As Bryman (2001) noted, Focus Group Discussion is a technique of collecting data from individuals who experience a concrete or a particular situation that forms the focus of the in-depth group interview.

Samples for the study were drawn from three Universities in the South Western region of Nigeria. The choice of the Universities in the South Western region was restricted to public universities because they provided a more diverse range of students or youths in terms of differences in ethnicity and religion. Essentially, the number of samples for the survey part of the study was also limited to 150 respondents- 50 from each of the three selected Universities in South Western region of Nigeria. Eighteen participants (Six in each of the three selected Universities) were recruited for the three sessions of Focus Group Discussions - the qualitative part of the study. The few participants in the Focus Group Discussions of the study were recruited from the sample drawn for the survey. Recruiting participants outside the samples drawn for the survey might demand another procedure and more resources. This, as was later shown at the data collection stage, had an advantage that the participants in the Focus Group Discussion had sufficient knowledge about the objectives of the research.

The sample drawn for the research was generally small in proportion to the large population of the study. However, the small sample was systematically drawn in such a way that all units of the population at the randomly selected three Universities had equal chance and independent chance of being selected. This kind of selection was necessary so as to make the sample drawn adequately represent the population of the study, thereby making valid generalization possible. Nevertheless, the composition of the participants in each session of the FGDs was heterogeneous, thereby consisting of participants with different social economic background, sex, age and ethnicity. These were the demographic variables that were meant to generate diversity of opinion on the subject matter of the research. As Barbour and Kitinger (1999) observed, bringing together people with differences for Focus Group Discussion is often illuminating because it will generate diverse opinions on the subject matter being discussed.

There were different levels of sampling in this study. First, three Universities were selected from which the respondents for the survey part of the study were drawn. The selection of the three Universities was from more than ten Universities in the South Western part of Nigeria, and it was through simple random method, using the fish bowl technique. This method was adopted and possible because the sample frame (list) of the Universities in the South Western region was readily available. The Universities drawn in this way were the University of Ilorin, Ilorin, Kwara State, Obafemi Awolowo University, Ile Ife, Osun State, and the University of Ibadan, Ibadan, Oyo State. They were all government owned/public Universities because selection of Universities for the study was restricted to public Universities for reason already mentioned earlier. Second, 150 students, who constituted the respondents for the survey part of the study, were drawn from the three selected Universities in the South Western part of Nigeria. This was done through a multi stage stratified sampling method. The technique involved stratifying the student population at each of the selected Universities according to certain physical characteristics known as strata. The strata in this sense are Faculties (Schools) and Departments. Therefore, in drawing the 50 respondents from each of the selected Universities, five Departments were firstly randomly drawn in each University. The random selection was repeated several times when more than one Department was drawn from one Faculty (School). This seemed to be a purposive consideration to make sure that the Departments selected cut across various Faculties (Schools). Then from each of the selected Departments in each University, ten students at different levels of their studies were selected randomly from the list of students provided by each of the Departments to make a total of 50 respondents from each of the three selected Universities.

Data for the survey part of the study were collected using a structured questionnaire. This kind of instrumentation allowed each respondent in the sample selected to respond to some structured questions in a pre-determined way. Thus instruments consisted of many closed ended with a few open ended questions that were derived from the objectives of the study.

In other to ensure that the questionnaire used to collect data in the survey part of this study was valid and reliable, it was pilot tested with some students from the sample selected at the University of Ibadan two times before its final administration on all the sampled respondents in the three selected Universities. The pilot test was significantly useful because it brought to the attention of the researcher some oversights and shortcomings that could have impaired its reliability and validity.

Data Analysis and Findings

Research Question 1: Does the youths' exposure to foreign television programmes influence their cultural habits, attitudes, values and behaviours?

Table 1 and Figure 1 below present data and graphic representation of the answer to the question.

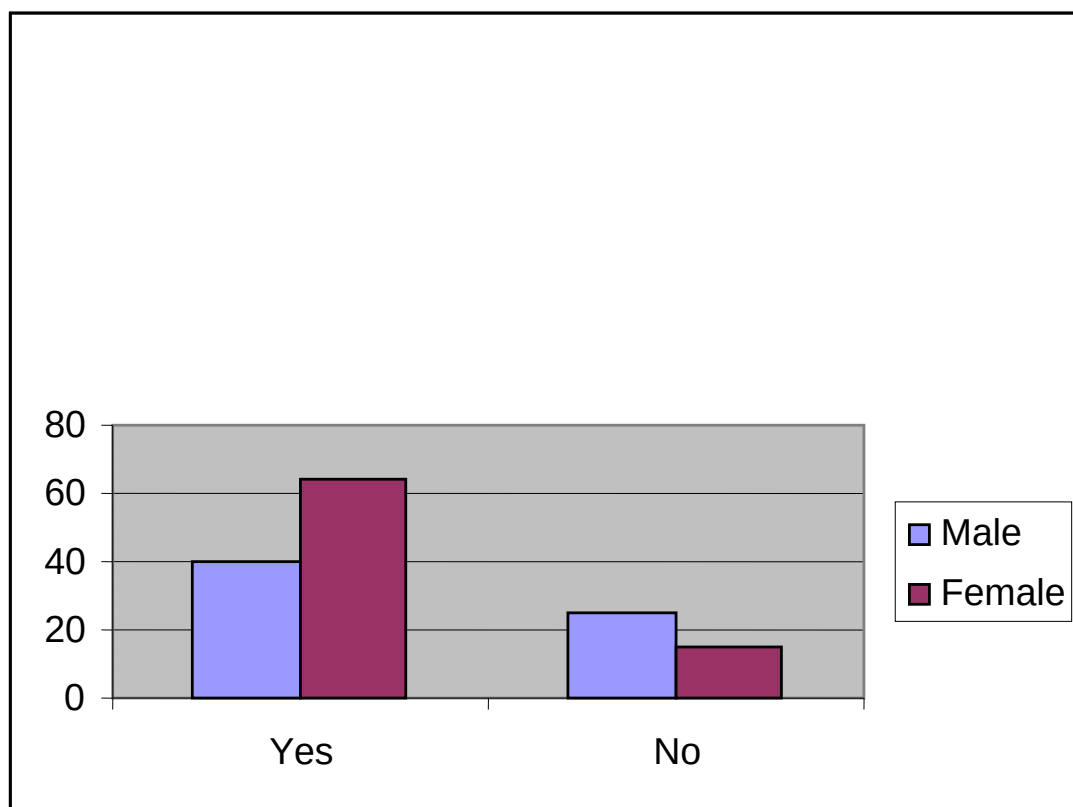


Figure 1: Bar Chart Showing Respondents' Opinion on whether or not Exposure to Foreign Programmes Influence Youths Cultural Habits and Attitudes

Table 1: Respondents' Opinion about the Influence of Exposure to Foreign Programmes on Youths Cultural Habits and Attitudes

RESPONSE	SEX		TOTAL
	Male	Female	
Yes	40 (38%)	64 (62%)	n=104 (100%)
No	25 (62.5%)	15 (37.5%)	n=40 (100%)
TOTAL	65 (45%)	79 (55%)	N=144 (100%)

As shown in both the Table 1 and Figure 1 above, a majority of the respondents agreed that exposure to foreign television programmes influenced their cultural habits, attitudes and behaviours. One hundred and four out of the 144 respondents, representing 72%, agreed that exposure to foreign television programmes had influenced their habits and attitudes in one way or the other. However, the majority of these respondents were female. In other words, 64 (62%) of those that agreed that exposure to foreign television programmes had influence them were female, while 40 (38%) of them were male. Nevertheless, 40 respondents said their exposure to foreign television programmes had not changed or influenced their behaviours or attitudes. Out of these, 25 (62.5%) were male, while 15 (37.5%) were female.

The above finding gets support from the discussions of the participants in the three FGDs. The discussions asserted that exposure to foreign television programmes have influenced many Nigerian youths in some ways. The following observations on the influence of exposure to foreign television programmes on youths' cultural orientations, attitudes and behaviour are revealing. "...One basic goal of learning is put into practice what we have learnt. When we say we watch satellite television, what are the things we gain? By watching foreign television, we ought to have developed ourselves and culture, but on the contrary

what our exposure to foreign programmes does is to kill local creativity and then we only watch to copy what we see on such programmes. Watching foreign television or programmes has really eroded our culture. I cannot remember when last I knelt down to greet my dad” (Participant 1, Group 1).

Exposure to foreign programmes has sort of induced in us inferiority complex. When we are talking of Africans, we value our culture a lot, but with our access to foreign television programmes, you will realize that it has changed a lot of things in the ways we dress, the ways we speak, the manners we greet at home. We now say the traditional ways we greet [prostrating if we are boys and kneeling down if we are girls in the morning to greet our parents] are old fashion (Participant 1 Group 1).

Exposure to foreign television programmes has great influence on our culture. During the course of this discussion, Participant 2 [one of the participants in the same group with the speaker whose name is withheld for anonymity] said each time she watched E-News, what she looks out for is the way models and celebrities dress so that she will copy them and she is a Nigerian. Of course you won’t tell me that is a positive outcome that will bring a positive outcome to our culture. See the way all of us dress, except Taiwo (poining at Taiwo, a member of his group) that depicts our culture with the way he dresses, every other person has been indoctrinated with what we see on foreign television that our African dressing pattern is old fashion or not modernized. Yes this is inferiority complex that we have gained not only from our historical antecedents but also from our access to foreign programmes. Really to me our exposure to foreign television programmes is eroding our traditional ways of life and attitudes (Participant 1, Group 2).

The above observations are clues to how the majority of respondents considered the extent and nature of the influence of exposure to foreign television programmes, Participant 1 (Group 2)’s reference to historical antecedents is probably what Uche (1989) referred to as familiarisation. Meanwhile, the common trends in the above arguments that noted that youths’ exposure to foreign television programmes erode Nigerian culture and make youths to abandon their traditional values tend to support or validate cultural imperialism thesis. Thus, to the majority of the respondents, the influence of exposure of Nigerian youths to foreign television programmes is negative or bad because it erodes Nigerian valued cultures like prostrating or kneeling down to greet parents in the morning, which a majority of the youths have abandoned or considered primitive.

Table 2: Respondents' Agreement or Disagreement to the Opinion on the Perceived Influence of Exposure to Foreign Television Programme on Youths' Cultural Orientations

OPINION	LEVEL OF AGREEMENT OR DISAGREEMENT					TOTAL
	Strongly Agree	Agree	Neither Agree/ Disagree	Disagree	Strongly Disagree	
Foreign Programmes influence my thinking and general ways of life	125 (87%)	19 (13%)	-	-	-	N=144 (100%)
It homogenizes culture	134 (93%)	10 (7%)	-	-	-	N=144 (100%)
I copy everything I am exposed to in Foreign programmes	114 (79%)	-	-	30 (21%)	-	N=144 (100%)
It widens my horizon in positive ways	30 (21%)	5 (3%)	-	-	109 (76%)	

Table 2 above confirms all the major fears and propositions of the cultural imperialism thesis. A majority of the respondents in this study strongly agreed that exposure to foreign programmes not only homogenizes culture, it also influences their thinking as they tend to copy most of the foreign attitudes, behaviours and practices they are exposed to in the programmes. One hundred and twenty five of the total 144 representing 87% strongly agreed that foreign programmes influenced their thinking and general ways of life. In the same vein, 134 (93%) of the total respondents strongly agreed that foreign programmes homogenize culture. Similarly, 114 (79%) of the 144 respondents strongly agreed that they copied almost every foreign practices they were exposed to in the foreign programmes. FGDs illuminates this finding with responses from the majority of the participants that cited examples of the practice of 'sagging', which most Nigerian youths copy from their exposure to foreign programmes. Sagging is the habit of wearing trousers on the waist in a way that underwear boxers show. According to many participants, this habit, which they considered irresponsible and uncultured, is imbibed from what youths see on satellite, and it is just a practice they copy blindly without knowing that it has its origin from the practice of American prisoners and hoodlums. No wonder then that 109 (76%) of the respondents strongly disagreed that foreign programmes hardly widen their horizons in any positive ways.

Testing of Hypotheses

Hypothesis 1: There is no significant difference in the nature of the influence or perception of the influence of foreign television programmes among the Nigerian youths in terms of the differences in their sex.

In other to test this hypothesis, a contingency table that cross tabulates sex and the values of the nature of the influence of exposure to foreign television programmes on youths as shown in one of the items of the instrument for the survey was used. Chi square statistics was

calculated with the data on the table. Using the data on the table with 0.05 as the level of significance, the following analysis was obtained.

Table 3: Chi square Testing from the Cross tabulation of sex and the values of the nature of the influence of exposure to foreign television programmes

X^2	X^2 tab	Degree of Difference	Level of Significance
17.7	7.988	7	0.05

The calculated degree of freedom is 7 while X^2 tab obtained from X^2 distribution table was 7.988. Since X^2 calculated was greater than the calculated X^2 tab, the above hypothesis was rejected. This means that there is a significant difference in the nature of the influence or perception of the influence of foreign television programmes among the Nigerian youths in terms of the differences in their sex.

Hypothesis 2: There is no significant correlation between exposure of the Nigerian youths to foreign television programmes and their adoption and manifestation of foreign attitudes, habits and behaviours.

Correlation co-efficient of the values of frequency of exposure to foreign television programmes and the scores of the rate of adoption of foreign practices by the youths was calculated to be 0.7, which means there is a strong positive correlation between exposure to foreign television programmes and adoption of foreign attitudes and practices. So, the result confirmed that there is a great correlation between exposure to foreign television programmes and the rate at which Nigerian youths adopt foreign attitudes, habits and behaviours.

Discussion

Essentially, this study found that more female students than male students have access to satellite television. Thus, more of the female respondents watched satellite television more regularly than the male respondents. Nevertheless, the analysis of the perception of the youths to the influence of foreign television on their cultural outlooks, as shown in Table 2, reveals that a majority of the respondents/youths agreed that exposure to foreign television programmes influenced their cultural habits, attitudes and behaviours. In other words, a majority of the respondents in this study strongly agreed that exposure to foreign programmes not only homogenizes culture, it also influences their thinking as they tend to copy most of the foreign attitudes, behaviours and practices they are exposed to in the programmes. This is in line with McQuail's (2005) assertion that cultural imperialism gives rise to a state of cultural homogenization or synchronization, leading to a dominant form of culture that has no specific connection with real experience for most people. A further revalidation or accentuation of this finding is supported by the establishment of the significant difference, through a chi square testing technique in Table 3, in the nature of the influence or perception of the influence of foreign television programmes among the Nigerian youths in terms of the differences in their sex. Significantly, there is a great correlation between exposure to foreign television programmes and the rate at which Nigerian youths adopt foreign attitudes, habits and behaviours. This test of correlation essentially affirms the basic finding enunciated in Table 1 and Figure 1 that a majority of the respondents/Nigerian youths agreed that exposure to foreign television programmes influenced their cultural habits, attitudes and behaviours. This finding thereby negates Ugochukwu's (2008) finding that exposure to foreign TV programmes does not equal disintegration of values and habits. On the other hand, it supports the basic thesis of cultural imperialism that is repeatedly established by many scholars such

as Tunstall (1997) and Sparks (2007). As Tunstall, (1997, p. 57) had put it, the main thesis of cultural imperialism is that “authentic traditional and local culture in many parts of the world is being battered out of existence by the indiscriminate dumping of large quantities of slick commercial and media products mainly from the US”, which they tend to copy blindly. Sparks (2007) also reasoned along this line by stating that “the indispensable truth of the theory of cultural imperialism was its recognition that the global circulation of media products was dominated by a few rich countries”. This domination, according to Sparks (2007, p. 12), “imposed important limitations upon the ability of the poor of the world to express themselves and their experiences”. So as Said (1985) opined, this study confirms that cultural imperialism has been operating at both the conscious and the unconscious level, providing images of what 'good' life means and seeking to shape Nigerian youths' identities. As Tomlinson (1993) asserted, at the heart of cultural imperialism is the claim that Western cultures through foreign television programmes overwhelm and threaten other vulnerable cultures because they tend to influence the cultural orientations of the people in the developing nations that consume them. This study, as shown in Table 1 and through the test of hypothesis 1, confirms Tomlinson's assertions.

Conclusion

In conclusion, this study does not give support to the active audience perspective that presumes that individual audiences have ability to reject the meanings in the texts they are exposed to. This is because Nigerian youths tend to take the preferred meanings of the messages in the foreign television programmes they are exposed to. In contrast to Ugochukwu's (2008) conclusion that because audiences have agency to reject or reappropriate what they see on the media, Nigerian audiences do keep separate their enjoyment of foreign programmes and any ideological positions they observed in them, this study concludes that Nigerian youths copy the foreign practices and habits they are exposed to in foreign programmes. The programmes influence, or better still, change their general ways of life, and tend to homogenize their cultural orientations to the mainstream culture and habits of the Western world. Consequently, the active audience perspective that the cultural studies and revisionist scholars glorify is not applicable or relevant to the understanding of the reception and impact of the foreign programmes by the Nigerian youths.

Recommendations

This study has some limitations. Such limitations include its restriction to the South Western part of Nigeria and the limited number of respondents selected from only three Universities to represent Nigerian youths. Even though the Universities and the respondents selected from them were selected randomly so as to enable valid generalization, the sample nevertheless is relatively smaller than the whole population of youths in Nigeria. So, generalizations made in this study cannot be absolutely valid. In light of this, it is firstly and essentially recommended that this study should be taken further by involving more students or youths in many more Universities in Nigeria. Such further studies should deeply explore how other major variables like religion and ethnicity influence the level, nature and extent of the impact foreign programmes have on Nigerian youths' behaviour, attitudes and cultural orientations.

With reference to the major findings of this study, the following are recommended.

- Subscription to satellite television cannot be banned because that will amount to infringement of basic human right to information and freedom of expression

entrenched in the Nigerian constitution. Nevertheless, Nigerian government should put in place some regulation at the point of reception.

- National Broadcasting Commission (NBC) should intensify its regulation not much on the local television stations but more on the satellite companies that provide access to the foreign programmes. Such regulation should involve closer monitoring of the channels on each of the operating satellite television or company in Nigeria.
- Parents should pay attention what their children/wards watch on satellite television.
- Government should provide incentives to make many indigenous television stations to transmit on satellite. Thus such indigenous stations will be able to reach the youths with local content.

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Authors' Biography

Dr Adesina Lukuman Azeez is a young mass communication scholar with research and teaching interests in Mass Media Theories, Communication Research, Representation of Social Groups in the Media, Reflection of Social Power in Media Representations, Audience Studies, Politics of the Press, Newsroom Culture and the Emerging Film Industry in Nigeria.



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