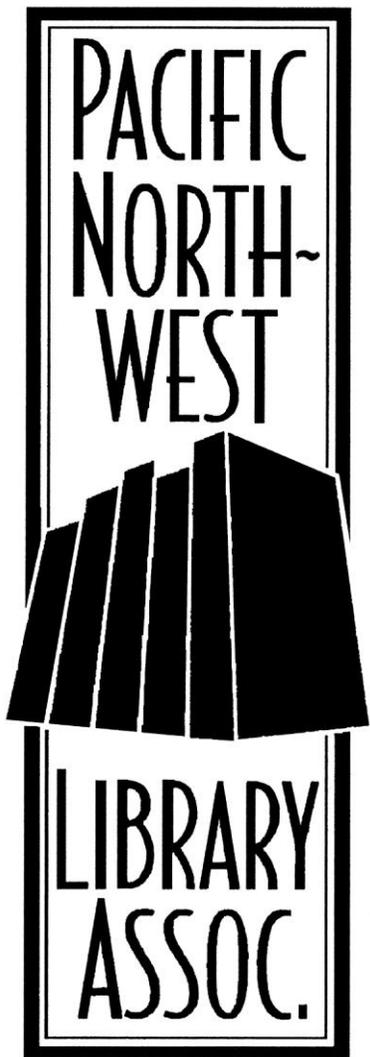


PNLA QUARTERLY

The Official Journal of the Pacific Northwest Library
Association



Volume 77, number 4 (Summer 2013)

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Volume 77, number 4 (Summer 2013)

Peer-reviewed Articles

F.U. Iwara. Personal Factors Affecting the Accessibility and Availability of HIV/AIDS Information to Rural Women in Yakurr Local Government Area of Cross River State, Nigeria	4
Margaret Adeogun. Library Leadership in a Participative Environment: Investing in What Works	20
Alexandra Barrows. The Phonics of Folksonomies: Learning how to Listen with Grooveshark	26
Olatunde Oyewole Ogunbiyi, Doreen Yemisi Olorunfemi. The Role of Libraries in Promoting the Documentation and Dissemination of African Traditional Religion in South Western Nigeria	32
Anne A. Elogie, Abel E. Asemota. Knowledge Sharing Behaviour of Academics at the University of Ibadan, Nigeria	40
Margaret Olusola Abimbola, Moses Oladele Adeoye. Tackling Aliteracy in Nigerian Secondary Schools: A Role for School Libraries	55
Toluwase Asubiaro, Williams Ezinwa Nwagwu. An Analysis of the Effect of Diacritical Markings on Index Terms in Some Yoruba Christian Texts	64

Personal Factors Affecting the Accessibility and Availability of HIV/AIDS Information to Rural Women in Yakurr Local Government Area of Cross River State, Nigeria

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Introduction

HIV/AIDS is one of the greatest public health problems of the 21st century. It threatens the life and health of millions of people worldwide (Schafer, 1991; Erinoshio et al., 2012). The alarming rate of the spread of HIV/AIDS especially in Sub-Saharan Africa has been of great concern. The 2009 statistics indicates a 5.0% adult prevalence rate among persons between 15 and 49 years in sub-Saharan Africa in contrast to 0.2% in Middle East and Northern Africa; 0.3% - South and South East Asia; 0.1%, - East Asia; 0.2%, - Europe and Central Europe and 0.5% in North America (Erinoshio et al., 2012). The spate of this disease may be attributed to the lack of adequate information and knowledge about the HIV virus mostly among people living in the rural areas as a result of several personal factors that may hinder the people's availability as well as access to adequate information. It is often acknowledged that information is power. Information is needed for a variety of purposes and its use depends on its availability, accessibility, purpose and various communication channels. Information is an essential resource to which individuals in every society should have easy access to (Kantumoya, 1992). According to Opeke (2002), information can be conceptualized as the gateway to other resources, be they social or economic.

Yakurr is one of the Local Government Areas in Cross River State with a population figure of 196,450 persons, with females constituting 48.9% (National Population Census, 2006). It is located in the central part of Cross River State. In the area, the level of HIV/AIDS awareness is high as a result of the availability of different sources of information. In Yakurr Local Government Area (LGA) just as in other parts of the state, information on HIV/AIDS is from different sources. Ononogbo (1985), Bii and Otike (2003) observed that information could be obtained through various sources such as interpersonal means, mass media, print formats and non-print formats. In a study carried out by Bii and Otike (2003), interpersonal sources of information such as friends, parents, relatives, healthcare workers and radio were reported as the predominant health information sources used by the respondents. In addition, traditional sources of information dissemination in the area are village meetings, age grade meetings, palm wine drinking spots, market women associations, farmers associations, social clubs, Christian women associations, village chiefs and town criers (Iwara, 2011).

Availability of information entails the provision and supply of information at the right quantity and time. Accurate, credible and accessibility of information whatever medium and quantity will be meaningless if it does not meet the need of the audience in terms of economic, social, political, cultural, scientific and technological (Iwara, 2011). Studies especially in developing countries have indicated that two out of every three persons who fall below the poverty line are women with highest rate of illiteracy, lowest educational levels and may not even have access to radio and television (Panos Institute, 1990). This perhaps makes it difficult for women to receive adequate information about AIDS/STIs. Aboyade (1987) noted that women have been identified as having several information needs and the information required are either not forthcoming or comes in a sporadic manner. They need information everyday despite their poor status to help them to be more capable in their social, political, economic and educational obligations.

Acquisition of information is primary, but it does not guarantee its accessibility for use by rural women (Murfin, 1980). Accessibility to information is seen in relation to nearness, ease of use and opportunities for interaction with people and other agencies (Weibull, 1980). Proximity and physical distance to a source or channel have been found to be factors influencing use of information. A major factor in rural under development and in all cases of social deprivation according to Green (1986), is lack of

information. The participation of rural women in many activities has been impeded by their limited access to information, education as well as their pre occupation with household duties. Utilization of any information depends on the information seeking behaviour of the people needing it at a particular time (Alegbeleye, 1986; Eteng, 1990; and Itoga, 1992). Lack of access to information was identified by (Sheba, 1998) as a major problem which hinders effective utilization of information by women and most rural dwellers. The factors that may impede HIV/AIDS information utilization include the distance to health resources and services like libraries, media resource centers, health facilities, low level of literacy and priority of some sources, culture and religion (Iwara, 2011). However, to ensure that Nigeria becomes a society where women's human right becomes an integral part of decision making from a gender perspective, they need information to improve the quality of life and to contribute meaningfully to the economic, political and social development of the country (Jibowo, 1992).

Several studies in the literature have examined the availability and accessibility of information sources to both students and teachers/lecturers in secondary and tertiary institutions, but the availability and accessibility of HIV/AIDS information to rural women has not received wide attention. The available studies place much emphasis on adolescents (both males and females) due to probably their sexual behaviour or in most cases both adolescents and adults. There are indeed scanty studies on the availability and accessibility of HIV/AIDS information to women in the rural areas who are at the risk of the scourge as a result of their limited access to education as well as their pre-occupation with household duties. It is on the background that the present study attempts to examine factors affecting accessibility of HIV/AIDS information to rural women in Yakurr Local Government Area of Cross River State, Nigeria.

Objectives of the Study

The objectives of this research were to:

1. Find out the various sources of HIV/AIDS information available to women in Yakurr Local Government Area.
2. Examine the problems women encounter while trying to access HIV/AIDS information.
3. Investigate how women have access to available HIV/AIDS information.

Research Hypotheses

The following hypotheses were tested:

- I. There are no significant relationships between availability, accessibility and utilization of HIV/AIDS information among women in Yakurr Local Government Area.
- II. The utilization of HIV/AIDS information among women in Yakurr Local Government Area is influenced by the accessibility and availability of HIV/AIDS information.

Literature Review

Studies have shown that HIV/AIDS information helps to equip individuals with appropriate information about the modes of transmission and prevention strategies to reduce risk behaviours. For example Nwagwu et al., (2011) examined HIV/AIDS information source use and sexual behaviour of adolescents in Ekwusigo Local Government Area of Anambra State, Nigeria. The result showed that handbills, television and friends were the most frequently used sources. Use of handbills is related to decreasing total number of sexual partners, and reduction in the chances that the respondent has ever had sex, while the use of television relates to the increased chances of ever having sex, although it increased the current number of sexual partners and the decreasing use of condom during last sex. Friends relates positively to condom use during last sex and if one has ever had sex, age at first sex, last time one had sex, and current number of sexual partners. Nwagwu et al. argued that increased investment in the use of handbills and use of friends could not only significantly reduce government's budget for HIV/AIDS awareness among youth but could also lead to increased effectiveness in achieving right information.

Unuigbe and Ogbeide (1999) posited that one of the major challenges of adolescent sexuality and reproductive health is lack of adequate information. Unuigbe and Ogbeide further argued that adolescent population needs to be fully exposed to sex education and that information on HIV/AIDS should be made readily available to them at home, in schools and public libraries. Iyaniwura (2004), in a study of the attitude of teachers to school based adolescent reproductive health interventions, highlighted the risk associated with adolescent sexuality and upheld that adolescents need appropriate information and skills to help them make informed sexual decisions. Iyaniwura further observed that information in itself is not adequate to change the risk behaviour of adolescents, but the information must be tailored to address the specific needs of the adolescents.

Ybarra, et al., (2006) reported that HIV/AIDS information awareness programmes make use of many different media to reach adolescents. These include: print media- books, posters, pamphlets, handbills; broadcast media- various programs on radio and TV stations; family- which includes parents, other parent-figures and siblings; friends and peers; and healthcare workers in general. Others are formal and informal education activities, telephone hotlines and the internet. In addition, earlier studies (Fawole et al., 1999; Buseh et al., 2002) believed the broadcast media seem to top the rankings in terms of their popularity as sources of HIV/AIDS and related information. Amsale et al., (2005) in their defined various parameters for assessing actual source use such as perceived credibility of the source, appropriateness of the message, accessibility of the source, timeliness of the information, applicability of the message and preferred source of information. According to the authors, the most preferred source of HIV/AIDS information for the adolescents was the radio, followed by television. Berenson et al. (2007) observed peers as a source of HIV/AIDS and reproductive health information to adolescents.

Onyancha (2008) reported that HIV/AIDS-information in many sources and several disciplines, it is worth noting that modern methods of information storage (e.g. electronic databases that provide multiple search options) have greatly improved retrieval, making it less difficult in accessing at when due. Nowadays, one can search for information within many databases as long as the databases share a search platform (e.g. EBSCOHOST databases). Alegbeleye (1986) and Itoga, (1992) asserted that utilization of any information depends on the information seeking behaviour of the people needing it at a particular time. However, Aboyade (1978) was of the view that not all the information required for rural development is available or accessible to the villagers. She suggested that the process of communication with the rural communities needs to be re – appraised to see how women can properly utilize information. Lack of access to information was identified (Sheba, 1998) as a major problem which hinders effective utilization of information by women and most rural dwellers. The problems that impede HIV/AIDS information utilization include the distance to health resources and services like libraries, media resource centers, health facilities, low level of literacy and priority of some sources of HIV/AIDS information.

Information, to satisfy the requirements of utilization, Burch and Grudnitski (1980) stated that it must have three attributes namely; accuracy, timeliness and relevance. In similar line of argument, NACA (2003) in her national policy on HIV/AIDS noted that the government of the Federal Republic of Nigeria acknowledges that a comprehensive information, education and communication (IEC) system is central to the nation's efforts to prevent the spread of HIV/AIDS and mitigate its impact. The review above emphasizes the relevance and accessibility of information on the fight against the spread of HIV/AIDS at the global, national and regional scales, but the rural area (mostly among women who have limited access to education and HIV/AIDS information due to their preoccupation to household duties) where the scourge is more pronounced due to the insufficient availability of information sources mostly the internet and newspapers have not received much research attention.

Materials and Methods

Study Area

Yakurr Local Government Area (LGA) was created out of Obubra LGA in 1987. It has boundary with Abi LGA, Obubra LGA, Biase LGA and Akamkpa LGA. It comprises 13 wards and the dominant language is Lokaa (Iwara ...). The 2006 National Population Census puts the population of females in Yakurr LGA to be 96,051. The villages that constitute Yakurr LGA are Ugep, Ekori, Mkpani, Nko, Assiga, Idomi, Agoi-Ibami, Agoi-Ekpo, Nyima and Ekpeta among other smaller settlements. The people of Yakurr LGA are largely farmers.

Research Design

The study employed the descriptive cross sectional research design to investigate the effect of personal factors affecting accessibility of HIV/AIDS information to rural women from different socioeconomic backgrounds and ages of 18 and above.

Sample and Sampling Procedure

The study employed the purposive, proportionate and accidental sampling techniques. The purposive sampling technique was used to select major settlements in the area (the villages were Ugep, Ekor, Mkpani, Nko, Assiga, Idomi, Agoi-Ibami, Agoi-Ekpo, Inyima and Ekpeti). These settlements/villages were selected because they constitute the nodal points to other smaller villages; the proportionate sampling technique was employed to determine the sample size of each selected village in relation to their population, while accidental sampling technique was used to administer the questionnaire. The accidental sampling technique was used for questionnaire administration since it was not possible to meet every woman at the spot. As such, only women met at the time of the survey were administered copies of the structured questionnaire. Women across the villages were sampled in churches, women organizations, social clubs, schools and cooperative societies. This technique was adopted to make sampling more representative and to enhance better supervision of the target population. In other, to sample a fair representation of respondents across the selected villages, the 2006 female population figure of each selected village was projected to 2010 (Table 1), and then subjected into the Taro Yamane formula for determining sample size of a finite population (Yamane, 1967 cited by Israel 2003) as follows:

$$n = \frac{N}{1 + N(e)^2}$$

Where:

n = sample size

N = projected population figure of the selected villages

E = limit of tolerable error (0.05)

This implies that 397 respondents (females alone) out of 70,740 females in the selected villages were sampled. However, after the sample size was determined, the questionnaire was distributed to the villages in relation to their population size (Table 1).

Table 1: Projected population and sample size of the ten selected villages

Villages	2006 population	Projected pop	Sample size (questionnaire administered)
Ugep	26,640	31,089	$31,089/70,740 \times 397 = 174$
Ekori	8,857	10,336	$10,336/70,740 \times 397 = 58$
Nko	6,526	7,616	$7,616/70,740 \times 397 = 43$
Mkpani	7,131	8,322	$8,322/70,740 \times 397 = 47$
Assiga	3,715	4,335	$4,335/70,740 \times 397 = 25$
Idomi	177	207	$207/70,740 \times 397 = 1$
Inyima	1,569	1,829	$1,829/70,740 \times 397 = 10$
Ekpeti	356	415	$415/70,740 \times 397 = 2$
Agoi-Ekpo	2,503	2,921	$2,921/70,740 \times 397 = 16$
Agoi-Ibami	3,145	3,670	$3,670/70,740 \times 100 = 21$
Total	60,619	70,740	397

The growth rate of 2.8% was used for the projection

Participants

The population of the study comprised individuals within the ages of 18 and above. The respondents cut across different socioeconomic groups, such as students, farmers, traders, civil servants and professionals (such as nurses) among others.

Instrument

A structured questionnaire was the sole instrument used to collect data. The questionnaire contained questions in relation to the objectives of the study. The instrument was divided into four sections. Section A measured respondents' demographic characteristics; Section B contained a set of questions designed to measure the sources of available HIV/AIDS information; Section C had a set of questions designed to measure HIV/AIDS information accessibility to women using responses ranging from Yes to No; while Section D had questions that measured the utilization of HIV/AIDS information using also responses ranging from not available (NA) to readily available (RA).

Procedure

The instrument was self administered to the participants (women) by the researcher with the assistance of a native speaker. This enabled communication with the respondents in their local dialect to be efficient. The questionnaire was structured to answer questions in relation to the study's objectives, as such; respondents were requested to react to the items in the questionnaire by ticking options that best describe their feelings/perceptions. The construction of the questionnaire was based strictly on

knowledge gained from review of literature and scholarly advice from experts. Some filled copies of the questionnaires were collected at the spot, while others were collected two or three days after completion. On the field, illiterate respondents were assisted to fill the questionnaire by the researcher with the assistance of a native speaker.

Ethical Considerations

During data collection, appropriate ethical conduct was maintained. Informed consent was sought from the study population. Confidentiality of information was ensured, and the study subjects were not identified by name on the questionnaire. In addition, permission to carry out the survey was obtained from the village heads as well as from the respondents after the purpose of the survey was explained to them.

Method of Data Analysis

The data was analyzed using a combination of descriptive and inferential statistics. Tables, percentages and charts were used to represent the data. The inferential statistics, notably bivariate regression and multiple regression analysis were used to test the research hypotheses at 5% (0.05) alpha level. In order to effectively carryout this test, items in the questionnaire coded for descriptive analysis were transformed or recoded into dummy variables (Winarti, 2010). For instance, questions like the educational background of women with nine (9) options was transformed or recoded into two dummy variables of primary education and below as 1, and secondary education and above as 2; profession with seven (7) options was transformed into two dummy variables of unskilled profession as 0 and skilled profession as 1; marital status with four (4) options was transformed into three dummy variables of single as 1, widow/divorced as 2 and married as 3; age with five options was transformed into three dummy variables of 18 – 31 as 1, 32 – 45 as 2 and >45 yrs as 3, while availability and use of HIV/AIDS information with four options (4) was transformed into a dummy variable of unavailable as 0 and available as 1. Also, yes and no options were transformed into dummy variables of 1 and 0 respectively. Statistical analysis was done with the aid of SPSS 20.0 for Windows.

Results and Discussion

Demographic characteristics of respondents

Information on the demographic characteristics of respondents showed that 25.7% were between the ages of 18 – 24yrs, 35% were within the ages of 25 – 31yrs, 22.4% were between the ages of 32 – 38 yrs, while 16.7% were within the ages of 39 – 45yrs. The marital status of the respondents indicated that 71.8% were unmarried, 22.2% were married, while 6% had problems with their marriages resulting in divorce. This implies that majority of the respondents are single, and being in their active reproductive age and urge for sex may have implications for the easy spread of STDs and especially of AIDS. Information on education revealed that majority (94.7%) of the respondents had formal education. This shows that they are literates who are aware of HIV/AIDS information. Information on occupation showed that 32% were students, 14.6% were complete housewives pre-occupied with domestic chores, while 53.4% were working to support their homes. Indeed, the nature of occupation influences women access to HIV/AIDS information.

Sources of HIV/AIDS Information

Table 1 gives vital information on the various sources of HIV/AIDS information available to women in Yakurr Local Government Area. It shows that siblings/friends/relatives, television, radio and newspapers/magazines were the major sources of HIV/AIDS information. These sources have far reaching effect on the women, and how they can live healthily. For instance, most of the current information on HIV/AIDS is passed on to the women by their friends and relatives either at home or during visitation. Another source with far reaching audience is the electronic media (radio and television); these sources create the necessary awareness on HIV/AIDS, and are readily available. This is because majority of the households in Yakurr have access to a radio or television set; and those who cannot afford any, do benefit from their neighbours. Through films, mostly especially Nigerian films

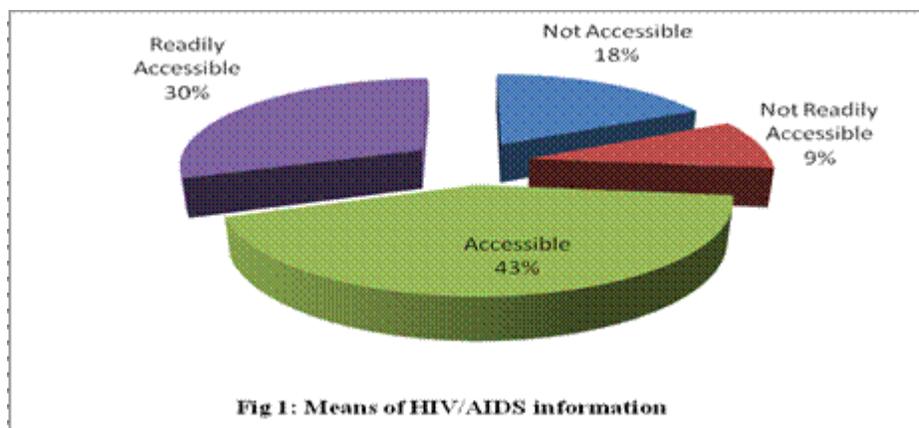
(home video), women are made to know the consequences of contracting HIV/AIDS, how to live with people having the virus as well as the need to protect themselves when the urge for sexual intercourse arises. The table gives other sources of HIV/AIDS information, but with low level of usage among rural women in the area.

Table 1: Means of HIV/AIDS information

Sources of information	Frequency	Percent
Textbook/Journals	36	9.1
Internet	9	2.3
Newspaper/Magazine	54	13.6
Posters	15	3.8
Handbills	5	1.3
Audio-visual	9	2.3
Radio	52	13.1
NGOs	28	7.1
Cultural sources	10	2.5
Siblings/Friends/Relatives	101	25.4
Television	78	19.6
Total	397	100.0

Access to HIV/AIDS Information

The information in Fig 1 reveals that HIV/AIDS information is accessible to women in Yakurr Local Government Area as a result of the availability of various sources through which information concerning the virus is disseminated to them. The high awareness coupled with the loss of loved ones has made women who are the custodians of homes to be aware of where to access HIV/AIDS information. The high affirmative response implies that the various sources of HIV/AIDS information mentioned above are accessible to the rural women.



Sources and level of accessibility to HIV/AIDS information

Table 2 examines the various sources of HIV/AIDS information and the level of accessibility of women to the identified sources. It shows that out of the 36 women that chose textbooks and journals as their source of HIV/AIDS information, 31 representing 86.1% alleged that HIV/AIDS information is accessible, while 5 representing 13.9% were of the opinion that textbook and journals are not accessible for use given the rural nature of some of the villages. On the use of internet, 6 representing 66.7% asserted that HIV/AIDS information is not accessible through the internet irrespective of the availability of phones, as not everybody has phones that connect to the internet. This is evident, as there are no cybercafés in the area, and it is not all phones that have the facilities to browse. For newspaper and magazines, 19 representing 35.2% were of the opinion that HIV/AIDS information is not readily accessible through this medium, as there are no print media houses in the area. The only available one, the Yakurr X-ray has low coverage as it is principally accessible to women in Ugep. In addition, it has low preference from the people, probably as a result of its indigenous nature. As such, not many women resort to it for HIV/AIDS information. The information further shows that radio; television and friends/relatives constitute sources of HIV/AIDS information readily accessible to women in Yakurr Local Government Area, probably as a result of their popularity. In all, the assessment reveals that 90.4% of the sources of HIV/AIDS information are accessible to the women in Yakurr Local Government Area.

Table 2: Sources and level of accessibility to HIV/AIDS information

Sources	Accessibility to HIV/AIDS information				Total
	Not accessible	Not readily accessible	Accessible	Readily accessible	
Textbook/Journals	5	0	21	10	36
Internet	5	1	3	0	9
Newspaper/Magazine	9	10	20	15	54
Posters	0	0	7	8	15
Handbills	0	0	5	0	5
Audio-visual	0	0	9	0	9
Radio	0	0	52	0	52
NGOs	5	3	14	6	28
Cultural sources	0	0	10	0	10
Siblings/Friends/Relatives	0	0	59	42	101
Television	0	0	0	78	78
Total	24	14	200	159	397

Sources and utilization of HIV/AIDS information

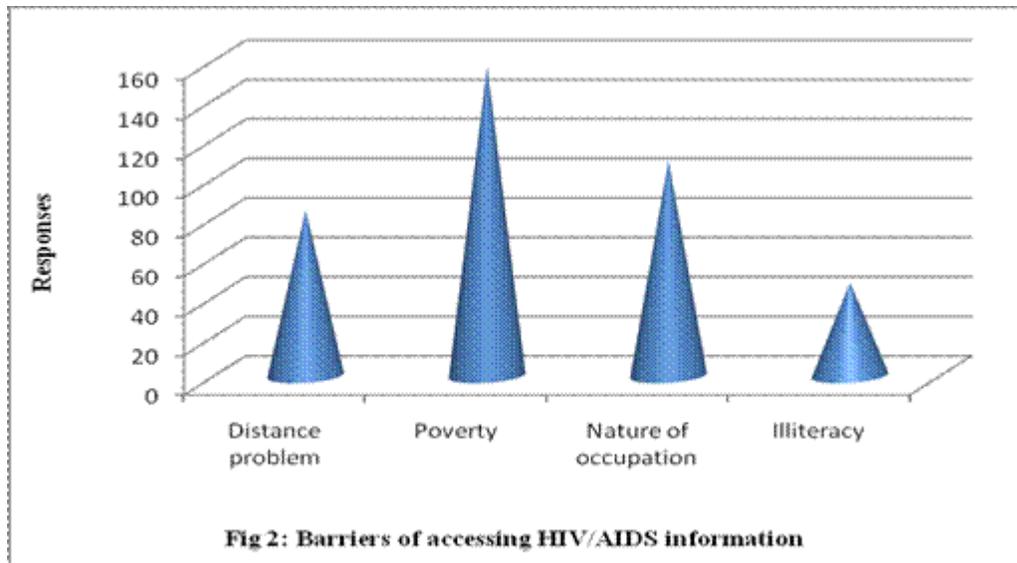
Table 3 gives information on the sources of HIV/AIDS information usually utilized by women in Yakurr Local Government Area. It reveals that textbook/journal, internet posters and handbills are poorly utilized sources of HIV/AIDS information, whereas, newspaper/magazines, radio, television, siblings/relatives/friends, NGOs and cultural sources are often utilized for HIV/AIDS information. The role of NGOs in creating awareness on HIV/AIDS must be commended and applauded. The IPGH (Initiative for People's Health), a Non-governmental Organization located in Ugep with facilitators across villages in Yakurr Local Government Area has helped to make both men and women come to terms with the HIV/AIDS issue. The facilitators educate people on the need to practice a healthy sex life as well as the possibility of contracting sexually transmitted infections (STIs) from multiple partners. In all, the assessment reveals that 72.5% of the sources of HIV/AIDS information are utilized by the women in Yakurr Local Government Area. This means that virtually all the sources of HIV/AIDS information are utilized by women in Yakurr Local Government Area

Table 3: Sources and utilization of HIV/AIDS information

Sources	Utilization to HIV/AIDS information		Total
	Yes	No	
Textbook/Journals	15	21	36
Internet	2	7	9
Newspaper/Magazine	41	13	54
Posters	4	11	15
Handbills	1	4	5
Audio-visual	6	3	9
Radio	41	11	52
NGOs	20	8	28
Cultural sources	8	2	10
Siblings/Friends/Relatives	80	21	101
Television	70	8	78
Total	288	109	397

Information Access Problems

Though, HIV/AIDS information as observed above is accessible and utilized by women in Yakurr Local Government Area, some of the possible factors that serve as constraint to the full utilization of the information as of when due are depicted in Fig 2. The Fig identifies poverty in terms of insufficient money as the chief barrier women encounter in trying to acquire and access some of the sources of HIV/AIDS information. The nature of occupation is another barrier women face in accessing and utilizing HIV/AIDS information. Women who engage in professions that do not create time for them to access and utilize HIV/AIDS information become less informed on the modalities surrounding the virus. For instance, the activities of a complete housewife may limit her chances of accessing and utilizing HIV/AIDS information even when such information is readily available. The African culture sees women as home keepers; this has implications on HIV/AIDS knowledge. Also, women who are traders hardly have time to utilize HIV/AIDS information as a result of the time consuming nature of their trade. This has implications on women's level of HIV/AIDS awareness and knowledge concerning the disease.



Availability, Access, and Use

The hypothesis that there are no significant relationships between availability, accessibility and utilization of HIV/AIDS information among women in Yakurr Local Government Area was tested using Pearson's correlation. The r-value results in Table 4 indicate that there are positive associations between availability ($r = 0.414$), accessibility ($r = 0.348$) and utilization of HIV/AIDS information which are significant (0.00) at 1% level of significance. This therefore implies that there are significant relationships between availability, accessibility and utilization of HIV/AIDS information among women in Yakurr Local Government Area. The result further implies that availability, accessibility and utilization of information are correlated in that an increase in one variable would bring about a corresponding increase in the other and vice versa.

Table 4: Pearson's correlations of the relationships between availability, accessibility and utilization of HIV/AIDS information

Test statistics	Accessibility	Availability	Utilization of HIV/AIDS information
Pearson Correlation	1	.841 **	.348 **
Sig. (2-tailed)		.000	.000
N	397	397	397
Pearson Correlation	.841 **	1	.414 **
Sig. (2-tailed)	.000		.000
N	397	397	397
Pearson Correlation	.348 **	.414 **	1
Sig. (2-tailed)	.000	.000	
N	397	397	397

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

Source: SPSS Window Output Version 20.0

Influence of accessibility and availability on the utilization of HIV/AIDS information

The hypothesis that the utilization of HIV/AIDS information among women in Yakurr Local Government Area is influenced by the accessibility and availability of information was tested using multiple regression analysis. Results obtained are presented in Table 5. The ANOVA result indicates that the utilization of HIV/AIDS information among women in Yakurr Local Government Area is influenced by the accessibility and availability of information. This decision is consequent upon the fact that the calculated F-ratio of 40.761 is greater than the p-Value of 0.000 at 1% significance level. Information on the significance of the predictor variables in influencing the utilization of HIV/AIDS information among women in Cross River State reveals that availability of information exerts more and significant influence on utilization of HIV/AIDS information ($p < 0.01$). This further implies that the availability of information determines its utilization, as it is only when information is available that it can be utilized by women in Yakurr Local Government Area.

Table 5: Summary of multiple regression result

Variables	Coefficients		
	b	β	t-value
Availability of information	0.39	0.44	5.598*
Accessibility of information	0.01	0.03	0.350
Test results			
F- value	40.761*		
R	0.41		
R ²	0.17		
Adj. R ²	0.929		
Constant	1.005		26.898*
DF	2/394		

*Significant at 1% significance level

Source: SPSS Window Output Version 20.0

Discussion

The study shows that majority of the respondents are young ladies who fall within the productive age. As such, they need relevant, timely and accurate information for healthy conception and delivery as well as information which would guide their attitude and activities on HIV/AIDS issues. This is obvious as this category of women constitutes the active reproductive age that are at the risk of contacting STDs due to their uncontrolled sexual willingness and wrong conception concerning the disease. The implication is that the availability of HIV/AIDS information to these age groups is necessary to facilitate and instill in young women healthy sexual intercourse and delivery. This result lends support to earlier and related studies like those of Aggarwal & Rous (2006) that women in the intermediate age group (20-39 years old), in both rural and urban areas are more likely to be aware of AIDS compared to women in the youngest (15-19), and older (40-49) age groups because the intermediate age would be more aware of, and willing to gain knowledge than would younger women. Also Snelling et al., (2006) stated that adolescents have a higher risk of HIV/AIDS infection as they engage in unprotected sexual intercourse, and their misconception that at their age, adolescents have a lower risk of any infection.

The study reveals that siblings/friends/relatives, television, radio and newspapers/magazines are the main sources of HIV/AIDS information to women in Yakurr Local Government Area. These sources have far reaching effect on the women, and how they can live healthily. Information on HIV/AIDS is commonly passed from one woman to another by friends and relatives at home or during visitation as well as during meetings and at places of worship. In a related study, Nwagwu (2007) showed that the role of friends and relations in HIV/AIDS awareness in selected rural communities in Nigeria is very significant. Also, Berenson et al., (2007) identified peers as very important source of HIV/AIDS and reproductive health information. Another source with far reaching audience is the electronic media (radio and television); these sources create the necessary awareness on HIV/AIDS, and are readily available.

This is because majority of the households in Yakurr have access to radio or television sets; and those who cannot afford any, do benefit from their neighbours. This assertion somehow corroborates those of Buseh et al., (2002), Nwokocha and Nwakoby (2002) and Okonta and Oseji (2006) that the broadcast media seem to top the rankings in terms of their popularity as sources of HIV/AIDS and related information.

The study also shows that HIV/AIDS information is accessible to women in Yakurr Local Government Area as a result of the availability of various sources through which information concerning the virus is circulated to them. HIV/AIDS information is not accessible through the internet irrespective of the availability of phones, as not every phone has the facilities to connect to the internet. The study indicates that radio, television and friends/relatives constitute sources of HIV/AIDS information readily accessible to women in Yakurr Local Government Area, due to their popularity. Furthermore, the analysis reveals that textbook/journal, internet posters and handbills are inadequately utilized sources of HIV/AIDS information, whereas, newspaper/magazines, radio, television, relatives, non –governmental organizations (NGOs) and cultural sources are frequently utilized for HIV/AIDS information.

The study recognizes the role of NGOs in creating and promoting awareness on HIV/AIDS. The IPGH (Initiative for People's Health), a Non-governmental Organization located in Ugep with facilitators, Community Volunteers, Peer Educators and Community Care Workers across villages in Yakurr Local Government which has helped to make both men and women come to terms with the HIV/AIDS issue. The above mentioned agents educate people on the need to practice a healthy sex life as well as the possibility of contracting sexually transmitted infections (STIs) from multiple partners. The group usually distributes men and women condoms and gives support to people living with HIV/AIDS among other vulnerable groups. The study observes that virtually all the sources of HIV/AIDS information are utilized by women in Yakurr Local Government Area. Poverty in terms of insufficient money is identified as the lead barrier women encounter in trying to acquire and access some of the sources of HIV/AIDS information. The nature of occupation is another barrier women face in accessing and utilizing HIV/AIDS information. This is because women who engage in professions that do not create time for them to access and utilize HIV/AIDS information become less informed on the modalities surrounding the virus. This has implications on women level of HIV/AIDS awareness and knowledge concerning the disease. This result in some way agrees with earlier studies like those of Winarti (2010), who reported that in Papua and Bali the respondent's working status showed a high significant correlation with HIV/AIDS knowledge.

The study indicates that availability and accessibility of information are significantly associated with the utilization of HIV/AIDS information. It also shows that the utilization of HIV/AIDS information among women in Yakurr Local Government Area is influenced by the accessibility and availability of information. This is because availability and accessibility of information have implications on utilization; as women can only utilize information on HIV/AIDS if it is available and made accessible to them. Similarly, accessibility cannot be attained if the information is not available, hence, availability necessitates accessibility. For this to be feasible, all barriers of information availability and accessibility such as distance, income and transportation among others need to be addressed squarely as measures to ensure utilization. Indeed, for information on HIV/AIDS to be fully utilized by women mostly in remote areas, it must be readily available and accessible without any hindrance or cost. This finding is consistent with those of Mekonnen and Mokennen (2002), when they reported that fees reduce women's use of health services and keep millions of women from having hospital-based deliveries or from seeking care even when complications arise. In similar manner, Ajayi & Akinniyi (2004); Ugah (2008) attributed poor utilization of health information among health seekers to the non-availability of sources, as information sources are not readily available and accessible.

Conclusion

The study has shown that the availability of various sources through which HIV/AIDS information is disseminated makes it accessible to women in Yakurr Local Government Area. Radio, television and friends/relatives constitute sources of HIV/AIDS information readily accessible to women in Yakurr Local Government Area, due to their wide acceptance and popularity. Textbook/journal, internet posters and handbills are inadequately utilized sources of HIV/AIDS information. The study observes that nearly all the sources of HIV/AIDS information are utilized by women in Yakurr Local Government Area. Poverty and the nature of women profession are identified as lead barriers women encounter in trying to acquire

and access some of the sources of HIV/AIDS information. Availability and accessibility of information are observed to drastically influence utilization of HIV/AIDS information; as both have implications on utilization. This is because, women can only utilize information on HIV/AIDS if it is available and made accessible to them. For full accessibility to HIV/AIDS information to be achieved in line with the Millennium Development Goals in the year 2015, the barriers of information availability and accessibility such as distance and cost need to be addressed.

References

- Aboyade, B. O. (1987). Libraries and information services to rural communities: RUDIS project as a case study, In: J. O. Asamani (ed). *Understanding conference of eastern, central and southern African Libraries*. Gabrone: Botswana Library Association: pp 107 – 113.
- Ajayi, N. A. & Akinniyi, A. R. (2004). Accessibility of Health Information to Primary Health Care Workers in Some Selected Local Government Areas in Nigeria. *Owena Journal of library and information science*, 1(2): 31 - 38
- Alegbeleye, G. O. (1986). Information needs of the masses and community information services. Paper presented at the workshop on Information Needs ... held at LARIS. University of Ibadan; July 7-9, p. 6
- Amsale, C., Getenet, M., Shabbir, I. and Yemane, B. (2005). Perceived sufficiency and usefulness of IEC materials and methods related to HIV/AIDS among high school youth in Addis Ababa, Ethiopia. *Afr. J. Reprod. Health*, 9(1): 66-67.
- Berenson, A. B., Wu, Z. H., Breitkopf, C. R. and Newman, J. (2006). The Relationship between source of sexual information and sexual behavior among female adolescents. *Contracept*, 73(1): 274-278.
- Bii, H. K. and Otikey, J. (2003). Provision and accessibility of health information to the rural communities in Kenya: A case study of Bomet district. *African Journal of Library, Archival & Information Science*, 13 (2)
- Buseh, A. G., Glass, L. K., McElmurry, B. J., Mkhabela, M. and Sukati, N. A. (2002). Primary and preferred sources for HIV/AIDS and sexual risk behavior information among adolescents in Swaziland, Southern Africa. *Int. J. Nurs. Stud.*, 39(1): 525-538.
- Erinosho, O., Isiugo-Abanihe, U., Joseph, R. and Dike, N. (2012). Persistence of risky sexual behaviours and HIV/AIDS: Evidence from qualitative data in three Nigerian communities. *African Journal of Reproductive Health*, 16(1): 113 – 124.
- Eteng, U. (1990). *Information needs and resources of management Staff of Calabar Cement Company*. Unpublished MLS thesis University of Ibadan. p. 13- 19.
- Fawole, O. I., Asuzu, M. C. and Oduntan, S. O. (1999). Survey of knowledge, attitudes and sexual practices relating to HIV Infection/AIDS among Nigerian secondary school students. *Afr. J. Reprod. Health*, 3(2):15-24.
- Itoga, M. (1992). Seeking understanding beneath the unspecific: An alternative framework for mapping information needs to communication. *Libri*, 42 (4):335.
- Iwara, F. U. (2011). *Availability and accessibility as influencing factors of HIV/AIDS information utilization among women in Cross River State, Nigeria*. A Post-field seminar presentation, University of Ibadan, Nigeria.
- Iyaniwura, C. A. (2004). Attitude of teachers to school based adolescent reproductive health interventions. *J. Community Med. Health Care*, 16(1): 4-9.
- Kantumoya, A. (1992). Public libraries and community information services in Africa. *African Journal of Library, Archives and Information Sciences*, 2 (1): 33-38.
- Mekonnen, Y. and Mekonnen, A. (2002). *Utilization of Maternal Health Care Services in Ethiopia*. Calverton, Maryland, USA: ORC Macro. Pp 3 - 4

- Murfui, M. E. (1980). The myth of accessibility: frustration and failure in retrieving periodicals. *The Journal of Academic Librarianship*, 6 (1):16-19.
- National Population Census Commission (2006). Calabar. Cross River State.
- Nwagwu, W. (2007). The Internet as a source of reproductive health information among adolescent girls in Nigeria. *BMC Public Health*, 7:354 doi: 10.1186/1471-2458-7-354.
- Nwagwu, W., Okoye, I. and Isiugo-Abanihe, I. (2011). HIV/AIDS information source use and sexual behaviour of adolescents in Ekwusigo Local Government Area of Anambra State, Nigeria. *Journal of AIDS and HIV Research*, 3(8):138-150.
- Ononogbo, R. V. (1985). Enriching information resource through keeping contact with information source: The case of Nigeria. *Nigerian Library & Information Science Review* 3 (1 & 2): 55-62.
- Onyancha, O. B. (2008). Growth, productivity, and scientific impact of sources of HIV/AIDS research information, with a focus on eastern and southern Africa. *African Journal of AIDS Research*, 7(1): 55–70.
- Opeke, R. O. (1995). Information dissemination to women during national strife: A review of the recent petrol crisis in Nigeria. *African Journal for the Psychological Study of Social Issues*, 2 (1&2): 27-36.
- Panos Institute (1990). Triple jeopardy: Women and AIDS. London: The Panos Institute.
- Sheba, N. K. (1998). Information for development in Africa. *Information Development*, 14 (3):154.
- Snelling, D., Omariba, D. W. R., Hong, S., Georgiades, K., Racine, Y. & Boyle, M. H. (2006). HIV Knowledge, Women's Education, Epidemic Severity and Protective Sexual Behaviour in Low and Middle-Income Countries. Cambridge University Press, <www.measuredhs.com/pubs/articles/dhs_articles_details>.
- Ugah, A. D. (2008). Availability and Accessibility of Information Sources and the Use of Library Services at Michael Okpara University of Agriculture. *Library Philosophy and Practice*; ISSN 1522-0222
- Unuigbo, I. E. and Ogbeide, O. (1999). Sexual behaviour and perception of AIDS among adolescent girls in Benin City Nigeria. *Afr. J. Reprod. Health*, 3(1): 39-44.
- Weibull, J. W. (1980). On numerical measurement of accessibility. *Environment and Planning*, 12 (1): 53-63.
- Winarti, S. (2010). *The influence of Socio-economic and Demographic Factors on Knowledge, Attitude and Behaviour Related to HIV/AIDS in Indonesia: An Analysis of Three Provinces: Papua, Bali & DKI Jakarta*. Published M.Sc. Thesis, Flinders University of South Australia
- Ybarra, M. L., Kiwanuka, J., Emenyonu, N. and Bangsberg, D. R. (2006). Internet use among Ugandan adolescents: Implications for HIV intervention. *PLoS Med.*, 3(11): 2104-2112.

Library Leadership in a Participative Environment: Investing in What Works

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Introduction

The continuous evolving of communication systems and the availability and accessibility to a wealth of instant information is promoting new ideas, issues, individualized learning and evoking curiosity. Today, being knowledgeable is not enough, rather, the ability to create knowledge is cherished. This diffused information environment is enabling people to gain expertise in many areas and is making people more assertive than ever. Knowledge, information, and ability for self education are setting people free of the age-long dependence on the library. They are claiming responsibility for their own lives. And in the memory profession, such as the library, it cannot be more complicated than the fact that we are working and providing services to a generation that understands better the economic and political importance of information for their wellbeing and self actualization. It is against this backdrop that the library finds itself. It is obvious that the leadership practices and behaviours that enhanced library services before the dawn of the knowledge age are no longer the most appropriate for achieving results in the present environment. In this paper the terms, leader, and library director are used interchangeably to refer to library leadership. And the terminology memory profession is used generically to refer to libraries, archives, museums and other information services centres.

Rationale

Certain developments in the knowledge age pose considerable challenges to library leadership in very specific ways:

- The emergence of a new demography - the Net generation information users who are more information savvy and possess considerable knowledge and skills in accessing information. They are assertive and independent and they like control, interactivity, and convenience, and as such, are nurturing a growing distaste for the library. They would rather turn to the ubiquitous Internet with its ever-improving search engines, and the World Wide Web as their source of information (Campbell, 2006). In the past, information professionals are experts as to the content of their libraries and had a strong professional and knowledge edge than their users. The users were completely dependent on libraries and their librarians. Today, it is the direct opposite; the library is dealing with a new generation of users who are independence and like to take control of their information seeking. This changing demography and information seeking behavior requires a new kind of leadership that can quickly perceive the need for change and put into operation all avenues needed for effecting change. The role of the library leader today is no longer that of the specialist on whom the library user holly depend in access information, rather, he has become a generalist working in partnership with information users, the faculty in other disciplines to provide relevant services that meet the needs of new millennials. He must have the ability to quickly identify emerging trends and use the collective strength of library personnel to adapt to the new trends.
- The possibilities created by the Web/library 2.0 emphasizing user-centred change through participatory information services call for a re-examination of leadership perception. Library 2.0 operates a model of the library as a community service, bringing a change factor underscored in the community centredness of the library. The argument is that since community interests change frequently, libraries must change as the community changes, and most importantly, they must let the community participate in the

change (Maness, 2006), and utilize the same applications and technologies as its community to effect change (Habib 2006). The emerging information industry calls for a new leadership style that is user-centred and participatory; a style that embraces user/community participation in the day-to-day management of the library.

- The lack of growth of succession-management systems as noted by Kartz (2003: 8) in the Library and Information Science (LIS) profession has led to a considerable shift in organization memory and experience owing to the departure of older librarians and their not being equally replaced. This aging demographic is resulting in serious collective loss of experience and expertise in leadership (Golden 2005: 17). As rightly noted by Bernthal (2004), the shortage of leadership urgently demands that a succession management system be institutionalized to provide alternatives to graying and retiring leaders. Such succession management system should focus on developing leadership for the present and the future. This is pertinent particularly at such a time when services are growing and the workforce is insufficient to adequately address the needs of new services and improve efficiency. In many parts of the world, particularly in large cities with a high turnout of immigrants, more public libraries are being established and they are providing variety of information resources to cater for the information needs of the growing highly diversified multicultural population (Burke, 2009). In many parts of Sub-Saharan Africa, higher educational institutions are being established at an alarming rate without sufficient professional librarians to lead in such institutions (Muller, 2008). They have resulted to “poaching” from the already established institutions, leaving the latter with serious leadership shortage. This needs prudent leadership and management skills.

- Of all the major changes that are dictating and pressurizing librarians to reform and engage new leadership practices is the premium placed on knowledge as the core resource of the economy and the new determinant of competitiveness for individuals, nations, and societies. Competitive economies have become essential in today's global markets, as they form the benchmark for capital growth, wealth creation, and economic progress (Dodgson, Gann & Salter, 2008). Societies aspiring to competitiveness have to take a democratic approach to the spread and the creation of knowledge. As noted in literature (Ndulu, 2007), most technologically advanced economies today are those that have been able to create and sustain effective knowledge economy while the poor nations are those with very little mechanism and capacity for tapping into knowledge for advancement. This is of particular relevance to Sub-Saharan Africa since it is the region with the widest scientific and technological divide (Maharajh, 2012) and consequently lags behind the rest of the world in almost all dimensions of infrastructure and economic development (Lundsgaarde, 2012). The library leader must be one that is able to function positively, flexibly, and collaborate with every sector of society to provide broad access to information for the political and economic advancement of the environment.

Libraries have acquired stronger political and economic values owing to these market-driven and politically driven changes. They have become the key elements crucial to democratic information society development since they provide open access to information and support knowledge building. Hence, information centres all over the world and their governments are formulating new political will and policies (Aubert, Jean-Eric ed. 2003). Many are developing new models, projects and initiatives to enhance and empower the information profession and the professionals to enable them respond more rapidly and accurately to the realities of the changing world. As per the nature of these transformations, libraries can no longer be unilateral in their actions and existence; rather, the leadership must work in partnership with networks, consortia, political organizations and other institutions in society to provide needed services. It is therefore important to rethink leadership management for the library since the leadership behaviours designed to optimize services in pre-knowledge society will not achieve results in the knowledge age. In facing these challenges, libraries have to:

- Restructure the organization system to reflect a team-based structure with few levels of management between the executive level and the front-line staff to develop core competencies for staff, and to equip them with creativity skills to implement change;
- Develop transformational leadership system with excellent strategy and planning to implement change.

Leadership and Change

Defining leadership, Vallabhaneni (2008: 235) remarks that leaders are drivers of continuous improvement who set goals and motivate people and provide continuity through succession planning.

Leaders influence or inspire others to achieve results through enabling others to act. Reiterating this concept, Northouse (2013:5) affirms that all good leadership models the way; inspire shared vision, and provide direction, and lead the group to achieve set out objectives. Leadership challenges the process, inspire, promote and oversee initiatives to do with long-term change (French, et al 2008: 419). Leaders see beyond the immediate crisis and inspire others to do better work. Dynamic leaders are not satisfied with the status quo; rather they constantly explore areas of improvement; challenge the process and constantly initiate change and help others to adapt to change. A leader has to plan, organize and cope with complexity, processes and procedures and use his influence to active results.

In discussing the concept of change, Manu (2007:70) asserts that change is a condition of human existence that is required in a person, in an institution, and in a group. He asserts that leadership is very critical to change. According to him, the leader is the pivotal of change and the process and successful implementation of change will be determined by his style of leadership. Further emphasizing the importance of leadership at a time of needed change, Kotter (2012) asserts that only leadership can penetrate the many sources of corporate inertia, and motivate the actions needed to alter behaviour in any significant way and bring about change. Only leadership can inspire the spirit of change, get it accepted and institute it into the very culture of the organization. Slater (2001:103) underscores the importance of leadership in an era of change by asserting that the leader pivots change and needs to develop a positive attitude to accepting the reality of change. Then the leader works cautiously to involve fellow employees, secure their engagement and support, and together coordinate the process of implementing change. Secretan (2004) asserts that leaders who inspire people to greatness by building on the strength of their employees are "Higher Ground" leaders. Reinforcing these attributes Marshall (2010:33) emphasizes that a good leader leading change must possess accountability, must inspire creativity and innovation, and build on the strengths of the staff. Such a leader must be fearless, and ready to take risks.

A major challenge to accepting and implementing change is how to manage the prevailing culture before the need for change. In dealing with this issue, Schein (2004) cautions against abrupt change of culture that could hamper the achievement of the desired change. Instead, the leader must identify and understand the prevailing culture, and lead fellow employees gradually to achieve the desired change and transform the organization. Such a strategy should be reinforced by nurturing and building good relationships inside and outside the team intensified with excellent communication strategies. It is very important for leaders to take cognizance of the realities in their environment, the shifts in ideas and practices, and guide their employees to rethink the vision and mission of the organizations.

The ideas and insights to leadership and change cited above are in harmony with leadership practices in the library. According to Herson (2006:13) in a diffuse, digital environment where communication continues to evoke new issues and challenges for the library and information science (LIS) sector, the leader must take a lead in embracing change. He further emphasizes that change management must focus on the infrastructure of libraries and the relationship between libraries and the broader society that they serve. This affirms Schein's (2004) perception that change must be focused on the realities of the environment and because of its complexity it is best implemented in an inclusive leadership system. Woodet al (2006: 19) reiterating this idea emphasize that change must be well managed, well planned, and it must focus on the library user, other stakeholders, and the needs of the complex environment. In leading effective change in the library, Olson and Singer (2004: 29) argue that library leaderships must respond to changing markets, customer needs and competitive pressure. According to them, the library must be led like a business enterprise and the users considered as "customers" for whom the library is competing for their patronage. In this regard, the library leadership can no longer operate in isolation since change is best achieved through an inclusive leadership style that will enable all categories of information stakeholders to participate in determining the services that are provided to them. This is an era of change and libraries must embrace it if the memory institution is to live up to the political and economic values that have been associated with it. .

Leadership Models

Command and Control

Olson and Singer (2006:4) assert that there are two major influences shaping the leadership landscape in the LIS system: The first, command and control, is the traditional top-down, hierarchical model that

originated in the industrial era, and continued up till the 1990s. This was the mechanistic industrial economy when organizations depended heavily on using any means possible to complete repetitive tasks (Lawler 2001: 14). So organizations followed a top-down view where the top leader made all decisions, and controlled the power. This parallels the exploitative and benevolent leadership styles that Paton and McCalman (2008) describe as authoritative and hierarchical and restricts input from staff and other stakeholders. In this context, leadership makes all decisions and uses power and authority to implement what has been decided. Secretan (2004: 30) argues that such leadership style creates process designed to reinforce system-wide behaviour and it controls by creating order, establishing rules and defining and achieving goals and outcomes. Such a leadership style is directive and relies heavily on control as the organizing force. When used in a command and control environment, these tools are designed to control, predict, and limit specific behaviours and outcomes. This concept is based on the premise that the organization is purely an economic entity with the priority to develop and set structures and controls that leverage capital as effectively as possible. Mathews and Wacker (2002: 188) described this perspective of leadership as being "fatally compromised." Senge (1990: 340) affirms this style as "deeply rooted in an individualistic and nonsystemic worldview." This definition nourishes a command and control environment where change is unwelcome, disrupting the status quo because it brings instability, and unpredictability. Leaders are heroes, and therefore in this context, only a few exceptional people are leaders. This model was applied in traditional librarianship, leadership was synonymous with the head or the library director and library systems and services were organized around command and control Model (Olson and Singer 2006: 4). For example, budgeting was a closed process developed only by a few people who have organizational control of resources. This exclusive hierarchical model cannot survive in this complex era of trans-discipline and knowledge-based structures when people pull their collective intelligence and experience together to think processes, solutions and address abstract concepts.

Chaos and Complexity

As we progress from the mechanistic industrial era with its bureaucratic paradigms to the to the knowledge-based multidiscipline era, the exploitative or command and control system gave way to the participative system which Olson and Singer (2004: 4) describe as, *Chaos* and *complexity*-terminologies that describe the fast-paced, dynamic networked organizations of the knowledge age. This type of leadership recognizes that organizations today are complex systems subjected to external influences, events, and therefore need to shift and change and evolve from the traditional top-down hierarchical model to a vertical, shared leadership model. Leadership in such a complex situation is organized around a flat, participative network environment that perceives organizational behaviour as people and skills oriented. Using the principles of connection, contribution and collaboration, the model seeks to involve subordinates, peers, superiors and other stakeholders in goal setting, team building and making decisions that affect the welfare of the organization. Often it is a synonym for democratic leadership, collaborative leadership, and shared leadership (Spillane & Diamond 2007: 1). In this leadership model, staff participation in decision making increases their productivity and build their capacity as they serve in a sector where services and products are constantly being improved to fulfill ever-changing customer needs. The leadership effort must have support from many people who assist the leadership agenda within their sphere of activity especially as it relates to shared vision. Shared leadership potentially has cognitive properties that are greater than the sum of their individual part (Spillane 2007: 8). It is a model that encourages the leader to create and maintain informal relationship among staff, employees and customers and the constituency that the organization serves.

This is particularly important when it is applied to an institution such as the library that continually reshapes itself. The leadership qualities required to implement needed change will need expertise in human capital management, and must be able to master emotional intelligence. Reiterating this concept, Secretan (2004: 30) asserts that organizations are not animates, but they are highly dynamic legal constructs designed to share human expertise and knowledge. This environment of interdependence and participation maximizes the application of human potentials for societal change and advancement. The change agent leader must know how to collaborate, not just control; lead through networks, not hierarchies; and align people through meaning and purpose, not structures. The leaders who will foster development in their organizations will be those who can guide leadership in others and help them to expand their capabilities to understand complexity. Leadership is not about taking orders from the library director; rather, leadership is expressed through different activities, projects, and quality services in each unit of the library.

The idea of participative leadership does not mean that everyone is leading; neither does it imply a chaotic situation. Rather it implies that everyone in the library sector has leadership ability, but in practice leadership activities will evolve with the needs of the organization and such needs are at varying times. The very nature of participative leadership means that important and pertinent decisions may be delayed in an attempt to gather input from every member of the team. But the library director can apply his initiatives at such emergencies or critical times when other styles of leadership may be applied. In reality different leadership models will be needed at one time or the other depending on the situation at hand, time available, staff strength and the leader. Such situations include:

- Applying the authoritative model when the library director has to coach a new employee and orient him/her with the job;
- Using the participative model when the library director is dealing with highly skilled library staff
- Or employing both but adopting a predominant style that is most suitable in addressing issues that confront the library.

Participative Leadership in the Library

In the library, the participative style operates from the premise that multiple people have values to contribute to changing the library and making it more responsive to the changing needs of society. So it requires expertise in human capital management. Reiterating this concept, Secretan (2004: 30) asserts that organizations are not animates, but they are merely legal constructs with dynamism built into them through sharing of human expertise and knowledge. This environment of interdependence maximizes the application of human potential for societal change and advancement.

This style enables the leader to find the best option by tapping the expertise, ideas and efforts of the staff. A leader who explores the participatory model, according to Senge (1990: 340), values and appreciates human potential and liberate their colleagues to the level of system thinkers and optimizers of a living system. The collective interaction that the model generates enables communication channels to flow upwards, downwards and horizontally across the library. Casey (2007: 45) argues that this style flattens the organization structure for the library and enable all levels of staff within the library, from the frontline staff to the library director to share thoughts and ideas as they brainstorm on new services and evaluate older ones and participate in decision making (Casey 2007: 45). Such vertical constructs provide flexibility, empower the staff and direct it to a more multi-skilled, multi-tasked, and cross-organizational teams that more effectively tailor services and resources to particular patron requirements.

The multi-skilled and multi-tasked approach of participative leadership promotes communication- a key component of participative leadership. As library employees work as a vertical team in solving problems, regular and systematic communication is generated from management to all units, and units to management and to all persons within the library. Such approach automatically fosters open communication throughout the library. Clear communication between department and hierarchical levels of the library will create an open working environment where information on projects, proposals, new services is shared. This way, library staff know that they are team players and not competitors-teams that work in collaboration and networks. They share the same mission but contribute to it in different and very versatile ways.

The vertical organizational approach reinforces the change factor in the library as a community service. Since community interests change frequently, libraries must change as the community changes and most importantly, they must let the community participate in the change (Maness, 2006). It must nurture the community and the library director needs to build strong partnership with all stakeholders including staff, clientele, cultural and educational institutions, and the private sector. At no time in history is this participatory model more appropriate than at a time when knowledge has acquired strong economic and political premium and the library is the pivotal sector for igniting knowledge building for societal competitiveness. It has become imperative for the community and its organizations to participate in the management of the library if they are to tap deeply into the growing stock of information and knowledge and adapt it to local use.

Participatory leadership fosters leadership development and succession planning. Through its team-based, multi-skilled structure, the director is able to identify leadership talents for development. Such leadership capacity building is critical particularly to a profession that is constantly undergoing change,

acquiring newer and nobler roles and responsibilities but faced with a crisis of graying professionals (Bernthal, Paul R. et al 2004). Succession planning guarantees that the library is equipped and staffed adequately to meet its evolving challenges, and its continuity and relevance to society. As the leader explores the diversity in the staff to achieve creativity, the staff is participating in the process of management, and the library director is empowering them and developing them as leaders

LIS activities have a high knowledge component in which people manage information, think and solve problems as opposed to doing repetitive, manual and physical jobs that are best achieved through machines or delegation. Such knowledge work is best achieved through team work; where people pull their intellectual resources together and creatively propose new services and improve older ones. The knowledge age shift from physical capital to intellectual capital is dictating a shift from the hierarchical job-based organizational structure to a vertical shared leadership system that values the collective knowledge of the library staff in solving complex problems. The library director is able to tap into the superior knowledge, skills and experience of other staff for corporate and vitalized decisions. This shared leadership style is a very safe management practice, particularly where the leader has very little knowledge and experience to offer on a particular assignment, the collective knowledge of the employees could adequately solve such complex problems.

Conclusion

In this age of interconnectedness and strong competition for customers, librarians and other information professionals need to understand leadership actions that make complex systems and change effective. As professionals, we must move out of our status quo and adopt an inclusive leadership style whereby leadership is exercised not only at every unit of the library but also with information stakeholders outside the library in decision making and in planning and implementing new services. The multi-tasked and multi-skilled approach to leadership will provide a conducive atmosphere for staff to assume greater responsibility and sharpen their skills for problem solving and for future leadership roles. Such an atmosphere of shared leadership ensures that the full capacity of staff and their talent and energy are geared toward addressing the many challenges that the library is facing and help them to be more responsive to societal needs. A relatively flat and more flexible and decentralized organizational structure will:

- promote cross organizational performance;
- foster a culture where the processes and acceptance of change will flourish; and
- enhance team spirit among library staff, and empower them to provide services that promptly meet the needs of library clientele.

References

- Aubert, Jean-Eric, & Reiffers, Jean-Louis (Eds.). (2003). *Knowledge economies in the Middle East and North Africa: Toward new development strategies*. Washington, DC: World Bank. P. 49
- Bernthal, Paul R., et al. (2004). *The leadership forecast: A benchmarking study*. HR Benchmark Group. Bridgeville, PA. p.1
- Block, Peter, Blanchard, Ken, Wheatley, Margaret, & Atry, James A. (1998). *Insights on leadership: Service, stewardship, spirit, and servant leadership*. New York: John Wiley.
- Burke, Susan K. (2008). Use of public libraries by immigrants. *Reference & User Services Quarterly* 48(4). P.164
- Campbell, J.D. (2006). Changing a cultural icon: The academic library as a virtual destination. *Educause Review* 41(1), 16-31.
- Casey, Michael E., & Savastinuk, Laura C. (2007). *Library 2.0: A guide to participatory library service*. Medford, New Jersey: Information Today, Inc. p. 45
- Dodgson, M., & Salter, A. (2008). *The management of technological innovation: Strategy and practice*. Oxford: Oxford University Press

French, Ray, Rayner, Charlotte, Rees, Gary, & Rumbles, Sally. (2008). *Organizational behavior*. New York: Wiley.

Golden, Janine (2005). Leadership development and staff recruitment Florida style. *Florida Libraries*, Fall

Habib, M.C. (2006). *Toward academic library 2.0: Sevelopment and application of a library 2.0 methodology*. A Master's paper for the M.S. in L.S. degree. University of North Carolina at Chapel Hill, School of Information and Library Science, November, 2006.

Hernon, Peter, & Rossiter, Nancy (2007) *Making a difference: leadership and academic libraries*. Westport, Connecticut: Libraries Unlimited.

Kartz, Richard, & Salaway, Gail, S. (2003) Information technology leadership in higher education: The condition of the community. Key findings of a study for EDUCAUSE Center for Applied Research (ECAR).

Kotter, John P. (2012). *Leading change*. New York: Harvard Business Press.

Lawler, Edward E. (2001) The future of human capital has finally arrived. In Bennis, Warren; Spreitzer, Gretchen; Cummings, Thomas (Eds.) (2001) *The future of leadership: Today's top leadership thinkers*. San Francisco: Jossey-Bass.

Lundsgaarde, Eric, & Roch, Marche (2012) Mapping development trend in Africa. In Lundsgaarde, Eric. ed. (2012) *Africa toward 2030: Challenges for development policy*. New York: Palgrave Macmillan, p.43

Maharajh, Rasigan, et al. (2012). Systemic technological innovation in Africa. In Lundsgaarde, Eric. (Ed.) (2012) *Africa toward 2030: Challenges for development policy*. New York: Palgrave Macmillan, p.141

Maness, J.M. (2006). Library 2.0: The next generation of web-based library services. *LOGOS: Journal of the World Book community*, 17(3), 139-145

Manu, Patrick (2007). *Leading without tears*. Pune, India: Angela Enterprises p.27,75

Marshall, Elaine Sorensen (2011). *Transformational leadership in nursing: From expert clinician to influential leader*. New York: Springer Publishing

Mathews, Ryan & Wacker, Watts (2002). *The deviant's advantage: how fringe ideas create mass markets*. New York: Crown Business.

Ndulu, Benno J. et al (Eds). (2008). *The political economic growth in Africa, 1960-2000*. Cambridge: CUP

Northouse, Peter G. (2013) *Leadership: Theory and practice*. London: Sage Publications

Olson, Christi A., & Singer, Paula M. (2004) *Winning with library leadership: Enhancing services through connection, contribution, and collaboration*. Chicago: ALA

Paton, Robert A., & McCalman, James. (2008). *Change management: A guide to effective implementation*. Los Angeles, California: Sage. P. 209

Schein, Edgar (2004). *Organizational culture and leadership*. San Francisco: Jossey-Bass.

Secretan, Lance (2004). *Inspire! what great leaders do*. New York: John Wiley & Sons.

Senge, Peter (1990). *The fifth discipline: The art and practice of the learning organization*. New York: Doubleday.

Slater, Philip (2001) Leading yourself. In Bennis, Warren; Spreitzer, Gretchen; Cummings, Thomas (Eds) (2001) *The future of leadership: Today's top leadership thinkers*. San Francisco: Jossey-Bass.

Vallabhaneni, S. Rao. (2008) *Corporate management, governance, and ethics best practices*. New York: Wiley.

Wood, Elizabeth J; Miller, Rush & Knapp, Amy (2007). *Beyond survival: Managing academic libraries in transition*. Westport, Connecticut: Libraries Unlimited.

The Phonics of Folksonomies: Learning how to Listen with Grooveshark

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Introduction

Started in 2006 by a college freshman, Sam Tarantino, Grooveshark, a subsidiary of Escape Media Group, is a website with a database of songs to stream, according to artist name, album, genre and song (McDermott 2012). The Grooveshark (2012) About Me page claims it is "one of the largest on-demand music services on the Internet," boasting "30 million users sharing over 15 million files" (Grooveshark). Grooveshark's services are free; in order to upload one's own music collection, however, the user must get a free membership. For an additional fee, users can additionally get extra privileges, like mobile access and no advertising. The songs (which act as lies) are uploaded by members, who are also in charge of categorizing, title and organizing each song, as well as curating larger "playlists" of their collections and tagging related artists and genres. ID3 (or the metadata container detailing information like song name, artist, and album) is imported directly (though sometimes erroneously) from users' music folders through a Java Web Start application and is then linked to the Grooveshark user (Wikipedia, n.d.). The database thus enables users to upload their personal music and share it with far-away friends. The scope of uploaded music is almost infinitesimal (over 15 million files) spanning 20 different genres.

The database's fraught relationship with the RIAA (Recording Industry Association of America), meanwhile, means that Grooveshark has obligingly had to remove songs (say, under EMI Records' copyright) from uploaded collections. Unlike the database of music I created earlier in the semester, Grooveshark does not require the user to provide Record Label names for each file. Since the database's inception in 2007, EMI, Sony, Warner Brothers and Universal Records have all filed suit against the database for copyright infringement (McDermott, 2012). Though the company once netted a revenue of 5 million dollars, it has recently had to lay a substantial number of workers and has closed several of its offices (McDermott). It is in a precarious position, which ultimately endangers its accessibility. In her article, Pritchard (2010) claims: "[...]Grooveshark [was sued]...so may have to restrict access to its content at some point in the future" (p. 16). I believe this background information is useful in evaluating the database. Indeed, it conveys the fact that the website is indeed a "work in progress;" with flaws but also with the potential to re-conceptualize itself.

User Model

The user model for this database is of twenty-something underpaid college-graduate office workers within the US trying to pass time by streaming music on Grooveshark. They thus must have a working knowledge of the specific details of whatever song or repertoire they wish to access. The user is expected to have perhaps cultivated a record collection at home (perhaps inherited, like mine, from a music-loving forefather or mother) or else have a rich iTunes library on their personal desktop. Because they are away from their favorite cherished titles, they rely on Grooveshark to access these particular songs remotely. Grooveshark strives to cater itself to a music connoisseur--someone with enough life experience to have a familiarity with song titles, artists, albums and spends enough time on (remote) computers to have the wherewithal to cull from its collections and access a particular song instantly.

Grooveshark has been organized by many different people, and is therefore susceptible to inconsistencies and inaccuracies. The fact that many of its songs (/files) are uploaded from users' collections creates a kind of folksonomy, that is, a system of categorization and classification based on users' own definitions--not using any controlled vocabulary. This shared curation implies that those using the database have music collections of their own, can apply terms knowingly and are perhaps more seasoned music-lovers than, say, the average inquisitive teenager looking to discover older music. But can the database instill structure and sense from its messy, massive content?

I will compare the explicit user model of 20-something music savant with the more amateur and basic user model of a group of teenage girls at the teen center of the library accessing the onsite computer to explore (both broad and specific) new music using Grooveshark. This comparison is particularly useful to me since I sometimes teach Music Herstory workshops to teen girls through an organization I volunteer for, Girls Rock Camp. One key aspect of my presentation is physically bringing in my mother's records to show them. I am interested in encouraging the teens I work with to use the Grooveshark database (especially at their library, if possible) to explore music without becoming alienated or overwhelmed. I will consider the important variable of lack of knowledge and inexperience, coupled with information-needs to listen to more generalized genres or else search out a particular title, song lyric or name that I would have shared during my workshop. Grooveshark allows me to push the girls I work with to launch their own musical research as well as tap into the names, records, and genres they are exposed to in looking at my mother's records. This second user model has different information needs than its implicit user model of a twenty-something music-lover. The adolescent user brings little knowledge to the database and wishes simply to hear a sampling of music from a particular era. Using recall, precision, relevance, metadata and accessibility as criteria, I will act as what Meadow calls an "intermediary" or third party judge" and thus try to evaluate Grooveshark not only according to the knowledgeable expertise of a music-lover but also through the fresher eyes of a teenage library patron.

Criteria for Evaluation

The relevance of retrieved terms were evaluated by calculating the precision and recall levels of a sampling of nine searches with keywords spanning from genres, song titles, album names, artist and even half-remembered song lyric. To calculate precision, I divided the number of relevant songs over the total amount of songs retrieved (a tedious task, since Grooveshark does not count the number of retrieved terms and one must scroll down slowly to hand-count). Using the user-sourced and ever-growing content of Grooveshark will pose some challenges to calculating or quantifying recall, however. Citing a study conducted by Blair and Maron (1985), Morville (2005) bluntly points to the shortcomings of recall in a growing database: "recall fails directly as the collection increases in size (Morville, p. 50). It is nearly impossible to assess the total amount of music on Grooveshark; in this way, I felt I could not determine "the total amount of relevant records in the file," particularly because the file is ever-growing and changing as users upload music freely and constantly (Meadow, p. 329). I decided I would instead attempt to divide the ratio of relevant retrieval records by the total number of songs/artists/albums/labels/genre that have been released...in the world (this meant totaling up a lot of discographies). In some cases, I anticipated that my recall results would be skewed because the denominator--the one song or artist I wanted to search--would inevitably be "one" (only "one" of them exists in the world). The inexperienced user would thus successfully locate their information need. Grooveshark provided mixed precision and recall levels: some particularly efficient in delivering relevant files, others misleadingly quantified and finally some that were impossible to calculate (see: genres).

Another criterion I will use to evaluate this database is stability. This term can mean several things: the consistency and continuity in interface; the database's reliability in terms of offering non-restricted content, its capacity to preserve and save playlists and even the very nature of its existence. One definite marker of Grooveshark is its inconstant interface (within a week, several new components were added) and I have already recounted many of its legal woes and how they obstruct song access. I will score stability on a scale of 1 to 5.

I will also use metadata as a criterion for evaluating the database. Files on Grooveshark rely heavily on user-generated tags (with the exception of their own aforementioned 20 Genres) to improve findability, as well as fundamentally organize all uploaded files according to song title, album, artist and genre. According to Morville (2005) "metadata tags applied by humans can indicate aboutness thereby improving precision" (Morville, p. 53). But does Grooveshark adequately use metadata in a way that reveals "equivalence, hierarchical and associative relationships" to my second user model--a teen who does not know anything about music? I will score it on a scale of 1 to 5.

My final criteria will be relatedness. I was allured by Meadow's description of one of the key questions in quantifying relatedness: "[...]whether two documents can be said to be related, or the extent of their relationship measured, outside the context of a real person's information need...a function of that person's mind"(Meadow, p.322). I found it resonated with my intention to search music by genre and more broadly considering the perspective of someone bringing little knowledge to their query. As

opposed to searching for a particular song, the user would want to learn more about a broader genre by exploring the "Genre" category. Would the genre query yield results that were correctly tagged and related to a specific genre? And would enough information be provided to ensure, as Meadow details, that needs are "effectively converted into an information statement?" (325). I also wanted to see if in searching for a particular album, I could easily listen to the correct tracks in their original order. I will score relatedness on a scale of 1 to 5.

Searches and Evaluations

Precision and Recall

-Kill Rock Stars Compilation: Recall: $1/(\text{number of tracks on all Kill Rock Star Compilations} = 55 + 14 + 23 + 18 + 21 + 23 + 18 = 172)$ so $1/172 = 5\%$; Precision $1/1 = 100\%$

-90s Hip Hop (genre): Recall: $0/n$; Precision: $0/n$

-"Baby Love" by the Supremes -1964 (song): Recall: $1/1 = 100\%$; Precision: $1/44 = 2.27\%$

-"Tapestry" by Carole King (album): Recall: $6 (\text{number of albums found})/1 (\text{relevant album}) = 600\%$; Precision: $6/205 = 2.9\%$

-"What's Love Got to Do With It" (song title): Recall: $9/1 = 900\%$; Precision: $9/70 = 12.86\%$

-"Strumming My Pain" (song lyrics): Recall: $0/1 = 0\%$; Precision: $0/0 = -\%$

-"Hound Dog" (original song performed by Big Mama Thornton): Recall: $19/1 = 19\%$; Precision: $19/271 = 7.5\%$

-Oaktown 357 (artist) = Recall: $2/1 = 200\%$; Precision: $2/2 = 100\%$.

How It Works

When accessing the Grooveshark homepage (<http://grooveshark.com/>), one is immediately inundated with a large ad for the new Nicki Minaj perfume. Grooveshark is increasingly opening up its interface to advertising. The search box, meanwhile, is somewhat hidden on the right part of the page. Inside the box, floating text invites the user to search either for song, artist and genre. The search term is thus lumped into three possible categories and the user cannot initially filter queries before launching into a search. The page also features several tabs: a "Home" tab, which displays your listening history as well as related artists, a "Genre" page made up of tags given by users, a "Community" tab which profiles other users' most recent listening history and a "Popular" tab which showcases the most listened to. To listen to particular songs, one must select the song they want from their results and drag it down to the bottom of the screen to create a fluid "playlist." Alternatively, the user can also select the "play all" option on the left of the screen above the results or the "add all" option, which adds all of the songs onto the list. A direct and strategic culling of the perfect song, as well as an already informed understanding of how to find it are necessary for an optimal Grooveshark experience.

Precision and Recall

I searched "Kill Rock Stars" (an important music label for women's music) under the Albums tab to find songs from its many compilation albums. I found only one result: a track from a later compilation in 2003. To quantify the recall value, I decided to divide the number of retrieved relevant tracks over the total number of tracks released on Kill Rock Stars samplers---that is, the total number of songs that any Grooveshark user could upload at any given time. The recall level was unsurprisingly low: only one track was available out of the total possible number of songs it could be off any album. Because only one song was retrieved out of a total of 172 potential records, we know our results are missing a large portion of all possible relevant records. As Meadow predicts, a "large portion of relevant records were not retrieved" (329). The precision value was, in turn, misleadingly high: a 100% rate is only attributed to the fact that only one search result was retrieved. The question of accessibility in this case is particularly

important to the teenage searcher. More songs should be included so our teens can have exposure to a diversity of titles.

On the other hand, when searching for the song "Baby Love" by the Supremes, I found one relevant result out of 44. The other 43 songs were not by the Supremes---they were either covers or entirely different songs from separate genres. The low precision value (2.27%) in this case inaccurately suggests that there "is work to be done." To the contrary, the database has successfully pulled up the one and only accurate response. The high recall value against suggests that all portions of relevant records were retrieved--all being that one song " (Meadow 329). Despite this misleading precision value, the granular need for a particular song by a particular artist ("Baby Love The Supremes" was the search term) is immediately relieved.

Morville (2005) refers to the Pareto Principle or 80/20 rule, claiming that "power laws only show up in complex networks that exhibit self-organization (p. 52). I chose to search "Hound Dog" because I think the song is an interesting way of demonstrating the ways women (and particularly women of color's) voices often get re-appropriated by those in power. According to its Wikipedia entry, the song was initially originally recorded by blues singer Willie Mae "Big Mama" Thornton in 1952 but is now most famously associated with "The King," Elvis (Wikipedia.). The results retrieved by Grooveshark in searching this song, as well as the levels of recall and precision (Recall: 19/1 = 19%; Precision: 19/271 = 7.5%) reveal that Big Mama Thornton is only accounted for 7% of the retrieved results for this song, while Elvis and other peers have a whooping 73%. While our results are sometimes skewed, perhaps this huge statistic disparity could in fact become an opportunity for my second user model to understand the intertwining of power and relevance.

Metadata

My search for "Tapestry" by Carole King first defaulted to a slew of song results with the album listed as "Tapestry", many of which displayed the creative ways people interpret and rename this beloved album. Some of my favorite puzzling entries included "You Make Me Feel (Like a Nat)" and "You'Re Got A Friends." Both are examples of how user-sourced databases can open up more search possibilities through alternative spellings or approximations--an ideal structure for an amateur music fan (like a high schooler). As previously mentioned, duplicates, in Grooveshark's case are hard to detect because there is such an overwhelm of streamlined data. Furthermore, the surplus of information and text-heavy surrogates make the database substantially hard to navigate, thus impacting its efficiency. As user-sourced information coming straight from users' own libraries, the metadata is often inconsistent, incorrect and inventive--but perhaps lack authority. Still, teenagers are allowed a margin of error in choosing a search term: indeed, respellings and renaming are encouraged by its structure of folksonomy. And finally, for users who are teenagers looking to expand their palette or learn more about music history, additional detailed metadata provided by the website itself would be helpful to illuminate the historical context of certain songs, relay related artists and further illuminate its vast collection. I would thus give the metadata a rating of 3/5 with ample potential for improvement.

Stability

Over the course of a month, Grooveshark has shifted formats substantially. At first, the user was forced to watch a minute-long advertising video before he or she was allowed to listen to anything; now he or she must just look at a giant ad. As previously mentioned, the database also now offers genre-based radio stations, as well as suggested artists--new additions in the past couple of months. The frequency with which the website re-invents its interface is confusing to both the seasoned user and the curious high schooler. Grooveshark's legal history also contributes to some anxiety when using the server--one is never sure whether his or her playlist will be saved, or what songs will show up as results. Pritchard recalls this uncertainty even in expelling Grooveshark's capabilities: "it may be worth the risk of possibly losing play-lists in the future in order to make a connection with your kids today"(Pritchard). Because the scope of its content is huge but amorphous, it is susceptible to not only copy-right infringement deletions but also to the threat of losing saved playlists as well as contributing to a relatively precarious experience of music listening. I would give stability a tepid score of 2/5.

Relatedness

One of the terms I decided to use was "90s Hip Hop" by selecting the Genre tab; this search yielded "no song matches" and one "tag" match which led to a playlist more broadly of nineties hits. 'But when selecting the Album tab, I am immediately offered an "I Love 90s Hip Hop Edits. Vol. 1" playlist. When one clicks on this playlist, a curated menu of songs starts playing immediately. The list, however, is saturated with duplicates and falsely included songs (Smooth Jazz??). And yet there they are, all lumped together, united by their shared tags. Similarly, when searching for the Carole King album under the Album, one is rewarded with many duplicates, tracks out of order, songs associated with the album but are in fact live versions or covers. False relationships are created through genre mis-categorizations and retrieved content cannot be presented in a way that demonstrates relationships between songs. I would give relatedness a scale of 1/5.

Conclusion

Grooveshark's broad scope, massive content and granular structure of obligatory cherry-picking ultimately overwhelms the untrained eye. False folksonomy, duplicates and mis-represented artists, songs and genres will confuse my teenage users as well as provide them with false information (and maybe force them to listen to the same song three times in a row That's enough to ruin any tune). There are gaping holes in what is present in the collection and what is not. More obscure (though still mainstream and pretty groundbreaking) genres like "90s hip-hop" will be nowhere, while power laws are evident in the ways through which certain populations (Big Mama Thornton) only account for a small percentage of retrieved results. And the legal implications of copyright-infringement would certainly intimidate any user model. Nevertheless, the user-sourced database is a valuable tool to any (aspiring) music listener. Its community of contributing users is vast and supportive, and could perhaps intervene when the user needs help. As a user-centered network, Grooveshark certainly takes its members into account; we can always consider putting pressure on the company itself to include more detailed historical metadata, as well as encouraging users to upload a more diverse and comprehensive repertoire. Finally, and most importantly, the sheer dearth of music ensures that our teenage population will always have something to listen to--even if they must cherry-pick.

Works Cited

- Golder, Scott A. and Huberman, Bernardo A. (2005). The structure of collaborative tagging systems. *arXiv.org*. Retrieved from: <http://arxiv.org/ftp/cs/papers/0508/0508082.pdf>
- Grooveshark. (n.d.). In *Wikipedia*. Retrieved from: <http://en.wikipedia.org/wiki/Grooveshark>
- Grooveshark. (n.d. a). About. Retrieved from: <http://grooveshark.com/#/about>
- Hound Dog (song). (n.d.). In *Wikipedia*. Retrieved from: [http://en.wikipedia.org/wiki/Hound_Dog_\(song\)](http://en.wikipedia.org/wiki/Hound_Dog_(song))
- McDermott, J. (2012). Case study: Can grooveshark get its groove back? *Inc.Com*. Retrieved from: <http://www.inc.com/magazine/201211/john-mcdermott/hands-on-case-study-grooveshark.html>
- Meadow, C. T., Boyce, B. R., & Kraft, D. H. (2000). *Text information retrieval systems*. (2nd ed.). San Diego, CA: Academic Press, Inc.
- Morville, P. (2005). *Ambient findability*. Sebastopol, CA: O'Reilly Media Inc.
- Pritchard, K. (2010). Let's get this party started. *School Library Journal*, 56(3), 34-37.

The Role of Libraries in Promoting the Documentation and Dissemination of African Traditional Religion in South Western Nigeria

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Introduction

When exploring Africa's considerable pre-colonial achievements, focus is rarely on the Traditional Religion of the Africans. Whenever references are made to the people's religion, conflicting and often negative allusions are often made about the people and their religion. These are the functions of one or more of the variables of prejudice, ignorance, missionary zeal, or deliberate academic falsification of fact about the people by the colonialists and other professionals. The phrase, "how can the untutored African conceive God?" is a famous statement credited to Emil Ludwlg (Idowu, 1972:88). Yet the Africans are incredibly and notoriously religious. Religion is central to the people of south western Nigeria. According to Idowu, (1962: 44), the Africans, are incurably religious. This statement is supported by Mbiti (1992: 26) when he refers to the Africans, to which the Yoruba of South Western Nigeria form a part, as a people devoted to their religion.

Ekeke (1994: 15), in his own opinion, about the religiosity of the people believes that various people of Africa own a religious system and a set of beliefs and practices which bind them together to their Ultimate. The foregoing has highlighted two varying opinions about the Africans and their traditional religion. It is against this backdrop that this paper aims at determining the roles of the libraries in the promotion of the documentation and dissemination of African Traditional Religion. The study therefore seeks to investigate the role of libraries in promoting the documentation and dissemination of African Traditional Religion in South West Nigeria by looking at the following objectives:

- Determine the current state of libraries in promoting the documentation and dissemination of African Traditional Religion in south west Nigeria.
- find out the shortfall in libraries for not promoting documentation and dissemination of African Traditional Religion in south west Nigeria
- Seeks to recommend to libraries in promoting documentation and dissemination of African Traditional Religion in south west Nigeria

The historical research method was employed for this study describing religious activities, roles of the libraries, archives and museum in relation to the life of south western Nigerians. As such, the researchers visited these centres (libraries, archives, museums and places of worship of the African Traditional Religion) to observe in reflection of their experiences from historical perspectives.

Problem Statement

According to Nakata and Langton (2005), the Library and Information profession has a great deal to learn if they are to effectively meet the indigenous knowledge in an appropriate way. Africa is a vast continent embracing various and variegated climate, ethnic groups, languages, culture, traditions and even religious inclinations. It therefore becomes necessary to situate the subject matter in a particular culture and ethnic group for effective appraisal. It is on this basis that the South Western area of Nigeria is chosen for this study. The choice of this place is informed by a few reasons. The primary occupants of this area are the Yoruba ethnic group, one of the largest ethnic groups in Nigeria (Oladipo, Olabiyi, Oremosu and Noronha, 2007: 20), The history of their religion spanned centuries has actually produced and influenced religions outside Africa (Adogame, 2007: 18).

The religions of Santeria or regal lucumi as practiced in Cuba; Oyotunji as practiced in the United States of America and those of Candomble, Umbanda and Batuque that are practiced in Brazil exhibit evidence of influence of the Yoruba religion as a fallout of the Atlantic slave trade. The Yoruba cities of Lagos, Abeokuta, Ibadan, Ondo Oshogbo, and Ile-Ife to mention only a few became areas of colonial interests and investments. These have produced an emerging urban, yet cosmopolitan population enabling most of these cities and towns to be centres where libraries are situated. The authors of this paper, being members of the Yoruba ethnic group, are familiar with the terrain of the area of focus hence their interest in carrying out this research.

African Traditional Religion: Misconstrued and Misrepresented

One of the common features of colonialism is the outright denigration of Africans and their religion. However, the basis for this denigration predates the coming of the Europeans to the African shores. It actually began with an intellectual pride and error of interpreting the meaning of religion from the perspective of the Europeans. According to Beyers (2010), majority of the definitions of and theories on religion have originated from a Western background giving room to the perception that religion can be understood only from their viewpoint. Hence, their definition of religion derives from Western philosophy. Christianity, being the dominant religion in the Western world became the yardstick used in measuring other religions, and any religion that do not fall into the Western mode is not regarded as religion. In fact they define African Religion from the viewpoint of the Europeans. Any practice that does not fall into their definitional mode cannot be a religion.

Therefore, African Traditional Religion which does not qualify by their indices cannot be called a religion. Momen, (1999: 69) while critiquing this myopic perception, came to the conclusion that this view led Western scholars to arrange religions in a hierarchical structure implying that some religions were inferior to the others. Other reasons for denigration abound: these include factors related to prejudice by Western scholars who invariably delineated African Traditional Religion with Christianity. The twin factors of ignorance and lack of in depth study of the people's religion by armchair scholars who depended on the data of ethnographers, explorers and missionaries led to faulty conclusions.

The cumulative effect of these misrepresentations ensured that the religion of the Africans was misconstrued. Apart from this, many of the Yoruba themselves came to see the religion of their forefathers as idolatry, polytheism and fetishism. This type of understanding has unfortunately convinced many Africans who will never see anything good in whatever is indigenous to Africa (Abioje, 2001: 61). Any good thing found in Africa, whether a material object or an idea must have according to such Africans come from the Western world. This misunderstanding continued until indigenous African scholars like John S. Mbiti (1970: 15) and E. Bolaji Idowu (1962: 44) in 1970s and 1980s, set out to refute some of the erroneous claims about African religion. They echoed the fact that "Africans have known God before the advent of the missionaries (Ekeke and Ekeopara, n.d. www.scihub.org/AJSMS). This position allowed the Africans and their religion to have a different perception.

What then is the traditional religion of the people of south western Nigeria? The religion as practiced by the Yoruba like other people of Africa is a religion that was handed over from generations to generations with the medium of transmission being oral. This indigenous religion is one without a founder, a reformer or a revivalist like other traditional and indigenous religions all over the world. Quite unlike the foreign religions of Christianity and Islam, the religion has no sacred writings like the Bible or the Quran.

Although worthy of note is the Ifa corpus often referred to as the *odu Ifa* existing among the Yoruba. This body of literature is still undergoing research and a lot of its component is yet to be unveiled.

The medium of information transmission is largely through oral traditions in form of myths, ritual, festival, arts, and symbols and lately through modern formats of audio video, compact disks and various other ICTs components. Evidence abounds today, both from the whites and indigenes to establish the fact that African Traditional Religion existence is not related or dependent on foreign religions. The several works of foreigners like Parrinder (1976), Bascom (1969) have attested to this fact, while it is a known fact that Susan Wenger lived and died in Oshogbo, an ardent believer in the Osun goddess. These are but a few examples of those dedicated to the refutation of allegations that seek to misrepresent the religion of the people. In addition, indigenous scholars of the African Traditional Religion who have worked assiduously to expose the religion as it is to the whole world are too numerous to mention but few scholars of south western Nigeria extraction includes Idowu (1996), Awolalu, Dopamu (1979) and Abimbola (1977). Their extensive submissions about the religion of their forefathers have corroborated other works on the people's religion from other parts of the world.

A close scrutiny of traditional religion of the Africans in South western Nigeria exhibits a few characteristic features that consists of five cardinal belief pillars ranging from the belief in God, who is variously referred to as *Olodumare*, *Olorun*, and *Eleda*. He is supernatural, divine, the creator and sustainer of the world. After Him comes the divinities who are often referred to as gods or deities. These divinities are the objective phenomena of the people's religion as they are easily accessible and functions as intermediaries between *Olodumare* and the worshippers. These divinities are called *orisa*, they number over four hundred. Closely following the belief in *orisa*, is the people's belief in the ancestors.

This is the belief in the living dead who sometimes serve as intermediaries and custodians of the heritages of the people. At other times, they also help to maintain social order within the confines of the living and dead members of the family. Then this is followed by the belief in the spirits which pervade natural phenomenon. The people's belief in magic and medicine is the fifth cardinal belief of the people. The flora and fauna of the forest region of the South western Nigeria has been used to produce several health portions that have assisted the people in the amelioration of their various challenges. These are the fundamental beliefs of the Yoruba of South western Nigeria on which anchors their faith, such as myths, destiny, salvation, taboos, ethics and philosophy.

Library Access to Indigenous Knowledge and Information

A library is a centre for the collection of sources, resources, and services. (Olanlokun and Salisu 1993) concur that a library refers to the structure in which the collections are accommodated; libraries are usually organized for the use of the public and maintained by either by a public body, an institution, government or a private individual. The word library refers to the institution that is devoted to the collection, preservation and transmission of human experiences, culture and religion. They (libraries) are custodians of information for people to access. According to Bamigboye in his description of library, is of the opinion that:

Modern libraries maintain resources that include not only printed materials such as books, periodicals, newspapers, and magazines, but also art reproductions, films, sound and video recordings, maps, photographs, microfiches, microfilms, CD-ROMs, computers software, online databases, and other media resources. In addition to managing resources in library buildings, modern libraries often feature telecommunications links that provide users with access to information at remote sites (Bamigboye and Alawiye, 2012: 3).

Regardless of the cultural information contained in the libraries, it is the responsibility of information institutions to ensure that the records obtained is managed, preserved and made available for later use (Clayton and Gorman, 2005: 46-56). The fundamental aim of libraries is to provide timely, accurate, pertinent, and reliable information to meet users' information needs (Ebiwolate, 2010).

Apart from libraries, there are other institutions devoted to the collection of similar information materials for the consumption of the public and for generations unborn who will eventually consume these products at a later date. One these information institutions are the archives. These are the centres devoted to the housing of historical records and collection of these records. The records that are usually contained in archives, unlike the libraries are primary source documents that have accumulated over a

period of time. The records or documents in an archive is usually not on display and cannot be seen as an exposition. They are less accessed by readers than the library because their contents are purely primary transactions. Libraries and archives are similar to one another in that they contain information materials that are accessible to the general public.

Another institution devoted to the preservation of information is the museum. A museum is a place or institution that houses and caters for the collection of artefacts and other artistic objects of historical importance and makes them available for public viewing through exhibits that may be permanent or temporary. From the foregoing, there is actually very little difference between the three resource centres of information. While it is the responsibilities of the libraries to have in their custody published materials in various formats like books, newspapers, periodicals, compact discs, films and a host of other digitalize formats, archives hold only primary sources which are the original documents themselves. An archive holds collections of items or "records" that often have meaning only in the context of the larger collection of a historical record. While library documents are easily replaceable, archival materials are not. This is the reason for the access restrictions into archives.

The issues of preservation are more imperative for archives than most libraries. However libraries do sometime hold archival materials. Museums, on the other hand are collections and custodians of artefacts, artistic objects which are usually placed in their building for the public to access. Much has been said about the professional differences between the three but for the purpose of this paper, they will be seen as one entity that they are devoted to the promotion of preservation and discharging of information. This opinion finds support by Gibson, Morris and Cleeve (2007: 53-64) who see a collaborative effort between libraries, archive on one part and museums on the other hand.

The libraries, archives and museum of South western Nigeria has been the major thrust of this present effort. The territorial space covers six states among which are: Lagos, Ogun, Oyo, Osun, Ekiti and Ondo states. Several higher institutions of learning are spread across the length and breadth of the place, an indication of the profusion of libraries. Apart from this, there abound several federal and state libraries owned and maintained by the federal and state governments. These libraries mark the major cities of south western Nigeria.

Additionally, there exist information centres in all the private tertiary institutions springing up in the area. As for the archives in the area, Abioye records that the Ilorin national archives office opened in 1982 while that of Abeokuta was opened in 1989 (www.emeraldinsight.com/0956-5698.htm) Other archives include that of the Lagos state government in Lagos and the one of the University of Ibadan. The museums in south western Nigeria are six in number among which are: Esie in Kwara State, Owo in Ondo State and the Uli Beier museum in Oshogbo, in Osun state, national Gallery of Modern Art and that of the Nigerian National museum both in Lagos and a virtual museum established in Lagos in the year 2011.

The Role of Libraries

Assessing libraries of developing African countries, Ogundipe (2005: 15-16) speaks of the significance of the role of libraries.

What is significant and makes librarianship interesting in the African setting or context of developing countries is the variety of roles that the library is expected to perform or fill in the absence of alternatives, and within which the librarian, there can find his or her own special interest and the opportunity for job satisfaction. The libraries are often expected to be educational centres, providing books, journals and materials for continuous education through formal examinations and informal education through independent self – study and general reading. Therefore, many of the libraries in spite of their category have to collect materials and develop collections that are open – ended to cater for all categories of users (Ogundipe, 2005: 15-16).

If the libraries, archives and museums are agencies with the responsibilities of collection, processing and disseminating recorded information in the various formats (printed and electronic) most convenient to its target users, then it becomes relevant to the preservation of African Traditional Religion. The Religion of the Africans and indeed the Africans, to which the South western Nigerian is an integral part, has been victims of abuse and misrepresentations. This has culminated into derogative terminologies of their religion and their persons, such obnoxious terminologies like heathenism, fetishism, and idolatry are a

few of words used in the description of the religion. The cumulative effect of this terminologies and obvious denigration of the religion of the Africans produce some complexes among the Africans. It is on this basis that the libraries have a major role in given the right picture about the people and their religion.

The libraries can contribute meaningfully in the documentation and dissemination of African Traditional Religion in South Western Nigeria in the following ways:

- Libraries and its other affiliates can promote the documentation and dissemination of the people's religion through the provision of adequate information, creating awareness and education of the religious traditional rites and knowledge about the community and its way of worship.
- Information on African Traditional Religion is available in larger quantity in Nigeria, while many are in the libraries, quite a number still exist outside the libraries. Libraries, must, as a matter of urgency identify and acquire materials through purchase and exchange which will aid researcher to access the materials objectively, in both negative and positive discuss on the religion.
- The easy access to religion of the people even when they do not share in the same religious concept will help to negate their cultural misconceptions.
- Following the educational role libraries play, relevant materials acquired by libraries are made accessible to the consumers at minimal convenience. Libraries have been structured to assist the reading interest of the readers. Wali (1991: 116-123), opines that special exhibition of materials can serve as reading resources both in print and electronic format. The libraries, archives and museums serve as links between the people of south western Nigeria to the outside world with regards to the acquisition of knowledge and dissemination.
- Besides, libraries assist the institutions of higher learning in the continuous development of their curriculum.
- The research approach to the role of libraries and its affiliate institutions is another point of emphasis.

Hornby defines research as a careful study of a subject, especially in order to discover new facts or information about it (Hornby, 2010: 1255). It is the diligent and careful investigation and a systematic study of a phenomenon. Dorothy (1977: 24) asserts further that libraries facilitate scientific studies, teaching and self-learning process.

- As repository of knowledge and information, libraries provide platforms for researchers in African Traditional Religion. A lot of materials on oral tradition, religion rites and about the people's religion are being documented in libraries where researchers can have access to them.
- One major role that these information custodians of libraries do to assist in the promotion of the documentation of African Traditional Religion is in the area of management. The concept of management involves planning, organizing, control, coordinating and directing.
- Another role libraries play in the promotion of documentation and dissemination of African Traditional Religion is apparent more in the museums. This is in the area of artifacts, arts, crafts, sculptures, markings and dresses. These convey identity, fashion, status and spiritual information.

These objects speak eloquently of the people's belief in God, spirits and ancestors. They all inform researchers about the people's taboos, philosophy and worldview. However, it is worthy of note that the management of these resources found in libraries, archives and museums giving it a long life span can be kept in show glasses, cupboards, confines, regularly dusted with brushes, well guided from theft and abuse and so on.

Challenges for Libraries

The challenges accrued to libraries in the promotion of African Traditional Religion can be viewed from two perspectives. These include the challenges of libraries in general and the traditional religion of Yoruba of South western Nigeria.

- The discourses of the writers' unveil that libraries, archives and museums spread all over South Western Nigeria need replacement of out-of-date document.
- A cursory examination of the documents on religion in most of the libraries of south western Nigeria, indicate that there are more documents on Christianity and Islam while those on African Traditional Religion are very few. This calls for urgent need to address paucity of its availability.
- Lack of funds is another major constraints of the libraries located within the South Western part of Nigeria.
- Many of the structures are dilapidating and in need of repairs. A group of newspaper journalists went round Nigeria to assess the state of the libraries in the country came up with the conclusion that most of the libraries are in bad shape (Awoyinfa 2012).
- Lack of infrastructure that will help in the documentation of these resources. Ajibero (2000) states the reason for this is the function of economic conditions, government attitude, and particularly information infrastructure. There are some documents that are in dire need of repair. Worthy of note, is unavailability of computers to facilitate the dissemination and documentation of the artefact. Mostert (2001: 16) support this view saying, some English speaking countries in Africa, are yet to acquire computers.
- The lack of sufficient libraries within the South Western Nigeria constitutes another challenge to the promotion of the documentation and dissemination of the traditional religion. Olanlokun (1993: 8) rightly observed that there was a substantial increase in the number of branches in some states of Nigeria. It must however, be pointed out that the number must be increased in order to meet contemporary challenges.
- Worthy of note, is the challenge posed by the technology of the e-libraries, which is still relatively new to the people of south western Nigeria. E-Library is an umbrella term covering library resources that are available online through computers and databases. These resources are different from the open internet, since they sometimes contain restricted access. Although the practice of Library Science profession is still growing and a lot of improvement and innovation are required, Nigeria is making efforts to make e-libraries most acceptable to the public (Oboh,2012).

The second part of the challenges has to do with African Traditional Religion of south western Nigeria:

- The attitude of most South Western Nigeria is naïve towards the art of religion. This made most Nigerians hold the view that the religion is a religion that must be discarded. This led to a function of the influence of the foreign religions of Christianity and Islam, who in their evangelical zeal has denigrated the traditional religion. The resultant effect is that the religion is treated with disdain, making it difficult for librarians to document their work. In addition to this, the custodians of the people's religion are gradually dying and not impart their wealth of knowledge leaving a vacuum because generations coming after them are not ready to be trained to take their place.
- The inability of the faith custodians to reduce their knowledge into writing offers yet another challenge to the promotion of their enterprise.
- Apart from this, the vast expanse of land referred to as the south west, Nigeria is the traditional home to the Yoruba, but the innumerable dialects make communications difficult. The names of one item differ from one ethnic group to the other, thus making it almost impossible to know items that are intended.

Conclusion and Recommendations

The foregoing has been an attempt to examine the role that libraries play in the promotion of the documentation of African Traditional Religion in South western Nigeria. The people in geographical location are traditionally Yoruba speakers. Their religion is the one referred to as African Traditional Religion in this work as they form a part of the African populace. It has been discovered that the religion has been largely misunderstood and that the libraries play a great role in the promotion of the documentation and dissemination of the people's religion. It is assured that the role libraries play in the documentation and preservation of the people's indigenous knowledge of their religion can never be trivialized. Libraries have therefore important roles to play in ensuring the growth, and expansion of African Traditional Religion of South western Nigeria to facilitate all round development in institutions.

From the findings, the researchers recommend that:

- African Traditional Religion is made compulsory in the teaching as a module or curriculum in secondary schools so as to inculcate the values of African culture and tradition on the students.
- Parents of different families and citizen should imbibe into their children cultural heritage so that the ethos of African Tradition Religion is passed from to generation.
- Valuable information regarding knowledge of the use of herbs in health issues, historical background and the likes about the south western Nigerian should be sorted out and such information is documented before they pass on.
- Government of South Western Nigeria should be encouraged to fund the libraries, archives and the museums in view of the relative importance to development.
- Libraries should seek to acquire materials in these areas and send staff for more training on how to document and preserve the artefact, documents and archival materials.
- There is the urgent need to promote the reading habit of the people of south western Nigeria. While it is true that education is free from the primary school to secondary schools, the attitude of reading is very low. This is so because a large percentage of people can neither read nor write. This calls for urgent need to promote the reading habit of the people of south western Nigeria
- Libraries should seek to acquire materials in African Traditional Religion areas and send staff for more training on how to document and preserve the artifact, documents and archival materials.

References

Abioje, P. O. Path to African Christian Theology of Inculturation. *JARS*,15, 2001.

Abioye, A. n.d Available: www.emeraldinsight.com/0956-5698.htm.

Adogame, A. Raising Champions, Taking Territories: African Churches and the Mapping of New Religious Landscapes in Diaspora. Theodore Louis Trost (Ed.). *The African Diaspora and the Study of Religion*. New York: Palgrave Macmillan, 2007.

Ajibero, M. I. Strategies and Tools for Information Service Delivery in the New Millennium. A Paper Presented at the NLA Annual Conference, 2000.

Ozurumba Benedict Anayochukwu, O. B. Urban Housing Financing in the South –Eastern States of Nigeria: Problems and Prospects. *Journal of Sustainable Development in Africa*, 13(8), 2011

Awoyinfra, S. Shame of a Nation: Problem-Ridden Public Libraries. *Sunday Punch*, 2012.

Bamigboye, O. B. and Alawiye, M. K. Managing Library Resources for Generational Use: Case Study of Two Federal Universities in Southwest, Nigeria. *PNLA Quarterly* 76, 2012.

Bascom, W. *African Arts in Cultural Perspective*. New York: Horton, 1973.

Beyers, J., 'What is Religion? An African Understanding', *HTS Teologiese Studies/Theological Studies*, Vol. 66, No. 1,2010

Clayton, P. and Gorman, G. E (ed) *Managing Information Resources in Libraries: Collection Management in Theory and Practice*. London: Library Association Publishing, 2005.

Awolalu, J. and Dopamu, P. *West African Traditional Religion*, Ibadan: Onibonoje Press 1979.

Dorothy, S. O. *A Manual for School Libraries on Small Budgets*, Ibadan: Oxford University press, 1977.

Ebiwolate, P. B. *Nigeria Public Library Service to Rural Areas: Libraries in Niger Delta States* 2010.

Ekeke, E. C. African Traditional Religion: A Conceptual and Philosophical Analysis. *LUMINA*, Vol. 22, No.2, ISSN 2094-1188.

Ekeke, E. C. and Ekeopara, C. A. "God, Divinities and Spirits in African Traditional Religious Ontology. Available: <http://www.scihub.org/AJSMS>.

Gibson, H, Morris, A and Cleeve, M. Links between Libraries and Museums: Investigating Museum-Library Collaboration in England and the USA. *Libri*. 57, 2007.

- Hornby, A. S. *Oxford Advanced Learner's Dictionary*. Oxford: Oxford University Press 2010.
- Idowu, E. B. *African Traditional Religion: A Definition*. London: SCM Press 1972.
- Idowu, E. B. *Olodumare: God in Yoruba Belief*. Lagos: CA Prints 1996.
- Mbiti, J. S. *Concepts of God in Africa*. Michigan: Praeger 1970.
- Mbiti, J. S. *Introduction to African Religion*. Michigan: Praeger 1992.
- Momen, M. *Understanding Religion: A Thematic Approach*. Oxford: One World Publication 1999.
- Mostert, B. J. African Public Library Systems: A Literature Survey. *LIBRES*. Vol. 11, Issue 1 2001.
- Nakata, M. and Langton, M. Australian Indigenous Knowledge and Libraries 2005.
- Nwokocho, U. Public Libraries in Nigeria: Decades of Persisting. *International Information & Library Review* 30 (2): 97-104, 1998.
- Oboh, Gloria. Popularizing e-library in Nigeria. *Leadership Newspaper*. 2012.
- Ogundipe, O. O. *The Librarianship of Development Countries: the Librarianship of Diminished Resources*. Lagos: Ikofa Press 2005.
- Oladipo, G. S, Olabiyi, A. O, Oremosu, A. A., and Noronha, C. C. Nasal Indices among Major Ethnic Groups in Southern Nigeria. *Scientific Research and Essay* Vol. 2 (1), 2007.
- Olanlokun, S. O. and Salisu, M. T. *Understanding the Library: A Handbook on Library Use*. Lagos: University Press 1993 .
- Parrinder, E. G. *African Traditional Religion*. London: Sheldon Press 1976.
- Wande, A. *Awon Oju Odu Mererindinlgun*. Ibadan: Oxford University Press 1977.
- Wali, R. S. A. *Reading in Education for All*. I. A. Kolo (ed) Ibadan: Text and Leisure Publishers 1991.

Knowledge Sharing Behaviour of Academics in the University of Ibadan, Nigeria

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Background to the Study

The transition of the world economy from an agrarian society, to an industrial society and presently to an information/knowledge society has made knowledge ubiquitous. Knowledge is now recognised not only as the most important resource in organisations but as the foundation of competitive advantage. According to Mchombu (2007), information and knowledge are a resource, a commodity and key determinant in the progress of any society, universities inclusive.

Mathis and Jackson (2006) explained that in the industrial era, competitive advantage of organisations was measured in terms of physical capital of employees. However, in this information age, there is a paradigm shift in which organisations leverage on 'intelligence' as the raw materials for production and to confer strategic advantages to businesses. Knowledge is embodied in human beings as the capacity to take action and this knowledge is an organised combination of ideas, rules, procedures, information and a firm's most valuable resource. It embodies intangible assets, routines and creative processes which are difficult to imitate.

The emergence of the knowledge-based economy has given rise on placing emphasis on knowledge management (KM) processes. Knowledge sharing (KS) is considered to be the most crucial aspect of KM (Bock and Kim, 2002). Lin et al (2009) also defined KS as a social interaction culture, involving the exchange of employees' knowledge, experiences and skills throughout the whole department or organisation. In any environment therefore, KS depends on social interaction.

Knowledge is the most important asset to a university because it forms the bedrock of all its activities (teaching, research and community services). All the activities in a university are geared towards knowledge generation, knowledge application and knowledge sharing. The ability to adeptly manage all diverse types and sources of knowledge used by academics and non-academics alike is crucial for the sustainable improvement in the performance of the university as a whole. One sure way of achieving this feat is by sharing knowledge. As reservoir of knowledge, universities are no longer just providing knowledge to students, but also sharing knowledge amongst one another in order to enhance productivity.

In universities, knowledge is shared when lecturers are teaching and co-teaching, during paper presentations and criticisms or in blind review processes, participating in academic management meetings, attending conferences and colloquia, during inaugural lectures, having conversations over lunch, etc. Giving and receiving knowledge is at the heart of academic life (Antal and Richebe, 2009). In an educational set-up, effective KS ensures that academics are able to realize and develop their potentials to the fullest. It is therefore imperative for workers in an organisation to have a constructive attitude to sharing knowledge in order for the organisation to be successful (Olatokun and Nneamaka, 2012).

Various studies abound that have helped to buttress that any human activity can be explained by examining the impact of human behaviour on such activities. Therefore, KS is one of such activities that can be explained by looking at how behaviour affects it. Hence, this study is adapting the Theory of Planned behaviour (TPB) to understand knowledge sharing behaviour (KSB) of academics in the

University of Ibadan. This theory constitutes a solid framework to identify issues that can help to understudy academics KSB.

The main objective of this paper is to investigate the factors that influence knowledge sharing behaviour of academics in the University of Ibadan.

Problem Statement

It has been observed that a growing number of literature on KS have often been approached from a profit-oriented perspective. These include: investigating the impact of rewards systems and incentives (Bartol and Srivastava, 2002), examining how job satisfaction (de Vries et al., 2006), motivation (Lin, 2007) and organisational knowledge capabilities (Yang and Chen, 2007) affect KS. This was attributed to changes in the socio-economic climate of the world. Obviously, the ultimate goal of KS in these institutions is profit-motivated. However, the issue of KS is equally important for a knowledge-based institution, such as a university, where knowledge production, distribution and application are ingrained in the institution (Cheng et al., 2009).

In Nigeria, various researchers (for instance, Ehikhamenor, 2003; Aduwa-Ogiegbaen, 2005; Adogbeji and Toyo, 2006) have studied KS amongst academics. Their emphasis was based on the technology approach which focused primarily on their use of computers and internet. The use technology is not the main issue that deters KS but the human resources themselves (Cabrera and Cabrera, 2002). Also, Enakrire and Ndubuisi (2012) studied KS amongst academics but they focused on the effect of tacit knowledge for teaching and learning processes.

Overview of Knowledge Sharing

The question of defining knowledge has occupied the minds of philosophers since the classical Greek era and has led to many epistemological debates (Alavi and Leidner, 2001). Hence, there is no generally acceptable definition of knowledge. Bhatt (2001) noted that defining data, information and knowledge is difficult but only through external means or from a user's perspective can one distinguish between them. However, in order to understand what knowledge is, it may be helpful to first make a distinction between data, information and knowledge.

Ahmad and Khan (2008) defined data as the combination of words, sounds and figures without some contextual details that could result from some survey in the form of raw numbers, or some assumptions in form of words. It does not have a meaning except to the person who originates it, whereas information is structured and so, meaning can be inferred from it. Bhatt (2001) explained that information and knowledge are differentiated based on 'interpretation'. Alavi and Leidner (2001) in differentiating information from knowledge also noted that:

"What is key to effectively distinguishing between information and knowledge is not found in the content, structure, accuracy or utility of the supposed information or knowledge. Rather, knowledge is information, possessed in the minds of individuals. It is personalised information (which may or may not be new, unique, useful, or accurate) related to facts, procedures, concepts, interpretations, ideas, observations and judgements".

Despite the differences that exist between data, information and knowledge, they are also interrelated. In order to extract value from data and information, some relevant and appropriate level of knowledge is needed (Ahmad and Khan, 2008). Consequently, data and information are useful only when they are applied or used to make practical decisions.

On the contrary, Schultze and Leidner (2002) explained that knowledge is a double-edged sword: while too little might result in expensive mistakes or inefficiencies, too much might result in unwanted accountability which could be counterproductive. This position is somewhat ambiguous as there are no clear indications of what will mean too much or too little information. In fact, it is believed that the more the knowledge base of an organisation, the better placed the organisation is in terms of offering unique products and services and also, satisfying customers and stakeholders.

Generally, sharing knowledge is about communicating knowledge within a group of people. The group may consist of members engaged in a formal institution, for instance, among colleagues in a workplace,

or informal, for example, among friends. The interaction may occur between a minimum of two individuals to a multiple of individuals. In other words, individuals share what they have learned and transfer what they know to those that have collective interest and who have found the knowledge useful.

KS is a multi-dimensional activity and thus involves several contextual, cognitive and communicative skills (Widden-Wulff and Ginman, 2004). The value of knowledge is expanded when it is shared. Therefore, if properly managed, KS can improve the work-quality, decision-making skills, problem-solving efficiency as well as competency that will benefit the organisation at large (Yang and Chen, 2007). Many factors would explain the success of knowledge sharing, including person relationship and trust.

Empirical literature on Academics Knowledge Sharing Behaviour

In this study, KSB is viewed as the extent to which academics actually share their knowledge with colleagues for professional tasks. Universities serve as the platform to enable academics speak of their ideas and insights (Martin and Marion, 2005) and add substantial value to the information-processing environment (Mphidi and Synman, 2004). One of the common functions of knowledge management used in the universities is to serve as the knowledge repositories (Bhatt, 2001).

A study conducted in a tertiary institution in Singapore (Wah et al, 2007) has shown that rewards and incentives, open-mindedness of the sharer, and the cost-benefit concerns of knowledge hoarding were the strongest predictors of KS in comparison to pro-social motives or organisational care. Similarly, Abdullah et al (2008) on a study carried out in seven major public universities in Malaysia found that appropriate incentives and rewards should be awarded for sharing, searching and the usage of knowledge management system as a mode of motivation. In a study carried out by Cheng et al (2009) on KSB in a Malaysian university, academics were motivated to share knowledge if the incentives and rewards mechanisms are encouraging to create the environment. Both the monetary as well as non-monetary incentives are crucial to generate the passion towards KS.

Studies conducted in higher educational institutions in Asia have shown that KS activities in the academic environment encountered similar barriers as in business environment. For instance, there seems to be a missing culture of KS in a business school in India, as most activities are individualistic, limited to internal peer group and interactions with external experts are limited to personal acquaintance (Basu and Sengupta, 2007).

Theoretical Framework

A review of literature reveals that there are no well-defined KS theories. Most of the views on KS are embedded in knowledge management theories (Sharrat and Usoro, 2003). However, several theoretical models used to explain KSB have been borrowed from various fields especially Psychology, Economics and Sociology.

This study adapts the Theory of Planned Behaviour (TPB) to provide an explanation for academics' KSB. TPB is an extension of the Theory of Reasoned Action (TRA) (Ajzen and Fishbein, 1980). In its original form, TRA proposes that behaviour can be predicted from a behavioural intention which the attitude and SN influences. Furthermore, TRA assumes that a person's behaviour is under volitional control (Ajzen and Fishbein, 1980). However, problems are encountered when the theory (i.e. TRA) is applied to behaviours that are not fully under volitional control. In other words, for some behaviour there may be personal deficiencies or external obstacles that may limit goal achievement. Therefore, the importance of volitional control has led Ajzen (1991) to develop the TPB by incorporating an additional construct, perceived behavioural control (PBC), to account for situations in which the individuals lacks substantial control over the targeted behaviour. Ajzen finds that many constraints in real life can hinder the formation of intention and behaviour, so he added a new dimension, PBC, to enhance the predictability of the TRA. TPB posits that individuals' behaviour is determined by behavioural intention and PBC. Behavioural intention is determined by attitude towards the behaviour, SN and PBC (Ajzen, 1991).

According to Bock et al (2005), some academics have found out that TPB can be used as a theoretical guidance for explaining knowledge sharing intentions. Thus, this study has adapted the TPB to explained academics KSB.

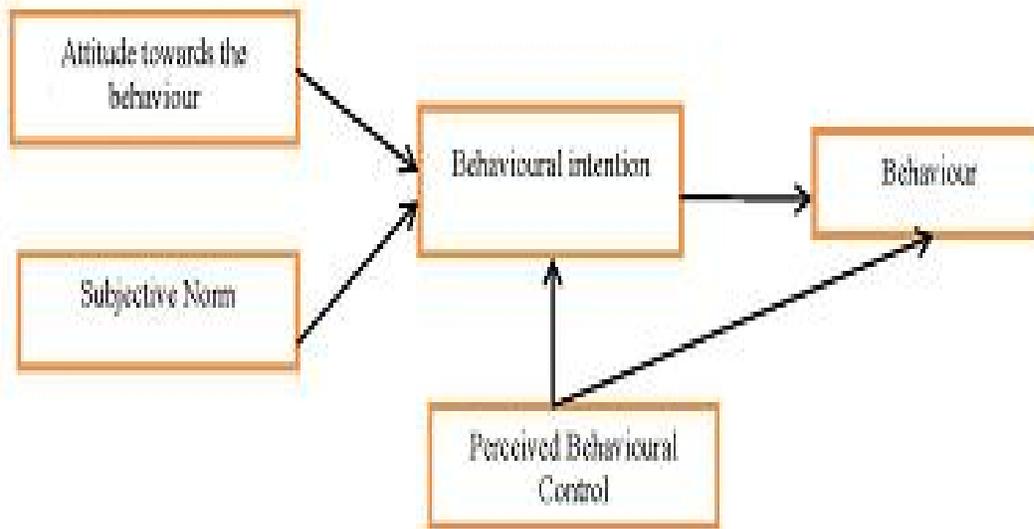


Figure 1: Theory of Planned Behaviour by Ajzen and Fishbein (1980)

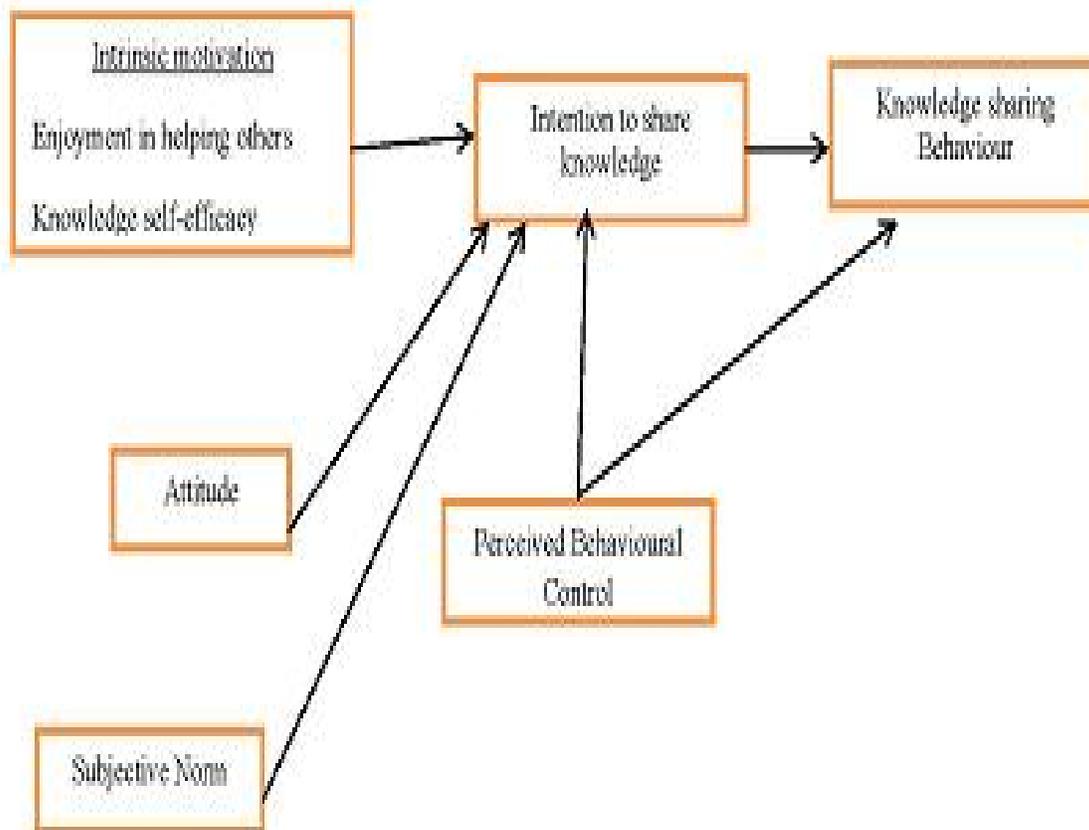


Figure 2

Based on the conceptual model, the following hypotheses were formulated:

1. there is no significant relationship between intrinsic motivation and academics' knowledge sharing intentions
2. there is no significant relationship between attitude academics' knowledge sharing intentions
3. there is no significant relationship between subjective norm and academics' knowledge sharing intentions
4. there is no significant relationship between perceived behavioural control and academics' knowledge sharing intentions
5. there is no significant relationship between intention to share knowledge and academics actual knowledge sharing behaviour

Methodology

This study utilised a survey design approach. According to the office of the Deputy Registrar, Establishment, University of Ibadan, the total number of academic staff is 1,189 for the 2009/2010 academic session and it cut across the 14 faculties of the university. Since the population involved was large; a sample was taken in order to infer facts about the academics' population in the University of Ibadan (UI). The population included all the academic staff in UI; from Professors to Graduate Assistants.

The sample frame comprised of academics in seven faculties of UI. These faculties which were chosen based on simple random sampling were: Arts, Science, Agriculture & Forestry, Social Sciences, Education, Basic Medical Sciences and Technology. They had a total of 870 academics and 62 departments. Although the estimated sample size was 254 respondents, a total of 46 respondents were added in order to make up for the copies of the questionnaire that may not be returned.

Due to the heterogeneous nature of the population, proportionate to size sampling technique was used. The first stage involved a random selection of seven faculties in the University of Ibadan; the second stage involved a random selection of academics from the departments in each of the faculties selected.

TABLE 3.1: PROPORTIONATE TO SIZE SAMPLING

S/N	FACULTY	POPULATION	SELECTED SAMPLE
1	ARTS	133	46
2	SCIENCE	207	71
3	AGRICULTURE AND FORESTRY	119	41
4	SOCIAL SCIENCES	109	38
5	EDUCATION	141	49
6	BASIC MEDICAL SCIENCES	79	27
7	TECHNOLOGY	82	28
	TOTAL	870	300

Source: Office of the Deputy Registrar, University of Ibadan

Validity and Reliability of Instrument

All measurements items were adapted from validated research. Questionnaire items on attitude, SN, PBC and academics intention to share knowledge were based on validated original TRA and TPB models (Ajzen, 1991) which are widely accepted in social psychology. However, modifications were made to suit this study. Finally, questionnaire items on KSB were adapted from the work done by Cheng et al. (2009).

With satisfactory content validity established, the instrument was further tested for ease of understanding by pre-test of fifteen academics which were taken from a department in UI but were not included in the study. Comments and suggestions about the question sequence, wording choices, and measures were also solicited, leading to several minor modifications to the questionnaire. In addition, construct reliability was assessed using Cronbach alpha based on the responses from the pre-test. The resulting cronbach alpha ranged from 0.71 to 0.9, proving evidence of internal consistency of the measures. According to Hair et al. (2006), the generally agreed Cronbach alpha value for social science research should not go below 0.70.

Data Analysis

Statistical Package for Social Science (SPSS) software was used to carry out the analyses in this research.

I. First, variables used to measure attitude, enjoyment in helping others, knowledge self-efficacy, knowledge sharing intentions, SN, PBC and KSB using a 5-point Likert scale were recorded as: (1= strongly agree) + (2= agree) = (1=agree), (3= not sure) = (2= not sure), and (4= disagree) and (5= strongly disagree) = (3= disagree)

II. Next, the measuring questions for the model construct were reduced to a parsimonious few using principal component analysis. Usually factor analysis would establish the contribution of each of the sources and then identify the most influential factors, thus reducing the total number of variables to a parsimonious few. These few factors would usually explain the most significant proportion of the total variance contributed by all the variables.

One of the major results is the explanation of the variances contributed by each of the variables often measured as 'Eigen values'; Eigen values less than one signify variables that are not making very significant contributions in the total variance explained by all the variables. More so, Bartlett's Test of Sphericity and Kaiser-Meyer-Olkin Measure (KMO) gives a significant value at $p < 0.05$, indicating that the correlation matrices are significantly different from an identity matrix, hence, justifying the extraction. A determinant > 0.0011 shows that the data is scalable and a value > 0.50 in KMO Measure also shows that the data is scalable and can be used for factor analysis (Li et al., 2010).

III. Finally, multiple regression was used to establish relationships between the independent variables and the dependent variables as stated in Hypotheses 1 to 5. Variables whose Eigen value was greater than 1 was used.

Results

Demographic Characteristics

Males accounted for 78.1% of the respondents, while 21.9% were females. The largest proportion of respondents was within the age group of 40-49years. Respondents whose highest level of education is Ph.D accounted for 93.3%. Most of the respondents were from the faculty of science (22.6%). Most of the respondents (21.9%) had working experience of between 15-19years while the highest number of respondents had the status of senior lecturer (27.4%).

Knowledge Self-efficacy

To assess the respondents knowledge self-efficacy, principal component analysis was applied to examine the structure of the seven identified constructs used to measure the parent variable as shown in Table 4.1

Table 4.1: Principal Component Analysis of Intrinsic Motivation

Knowledge self-efficacy	Mean	SD	Factors	
			Factor 1	Factor 2
Sharing my knowledge with my colleagues would create new ideas to write journal articles	1.01	0.192	0.846	
Sharing my knowledge will increase productivity in my department/ university	1.01	0.183	0.571	
I have expertise required to provide valuable knowledge for my colleagues	1.02	0.182	0.637	
Sharing my knowledge will help others in my department/university	1.01	0.161	0.342	
I feel confident expressing my ideas in verbal form to my colleagues	1.01	0.172	0.358	
I feel confident articulating my ideas in written forms to my colleagues	1.01	0.183	0.362	
I am confident in my ability to provide knowledge that my colleagues consider valuable	1.00	0.136	0.279	
Enjoyment in Helping Others				
I enjoy helping my colleagues by sharing my knowledge	1.01	0.243		0.941
it feels good to help my colleagues by sharing my knowledge	1.00	0.220		0.470
I enjoy sharing my knowledge with my colleagues	1.02	0.243		0.340
Sharing my knowledge with my colleagues is pleasurable	1.01	0.211		0.172
Determinant of correlation matrix	-	-	0.049	0.035
KMO and Bartlett's test (significance level)	-	-	0.000	0.000

The first group of independent variables are 'knowledge self-efficacy' and 'enjoyment in helping others' as shown in the results in table 4.1. 'Knowledge self-efficacy' consist of those who have confidence in sharing valuable knowledge with their colleagues, those who have expertise to share knowledge, helping colleagues solve problems by sharing knowledge, those who have confidence in expressing knowledge verbally to colleagues, those who have confidence in articulating ideas in written form to colleagues, sharing knowledge in order to create ideas to write journal articles and sharing knowledge in order to increase productivity. Within this group, the first factor was loaded on 'Sharing my knowledge with my colleagues would create new ideas to write journal articles'; it had the highest loading of 0.846, the

highest proportion of variance (53.521%). It also had an Eigen value of 3.746 indicating that this variable is sufficient to represent this group.

Also, 'Enjoyment in Helping others' consist of those who enjoy sharing knowledge with colleagues, enjoy helping colleagues by sharing knowledge, those who feel good when helping their colleagues by sharing knowledge and those who find pleasure in sharing knowledge with colleagues. Within this group, the first factor was loaded on 'I enjoy helping my colleagues by sharing my knowledge'; it had the highest loading of 0.941, the highest proportion of variance (78.027%). It had an Eigen value of 3.121 indicating that this variable is sufficient to represent the group.

Table 4.2: Principal Component Analysis on Attitude

Attitude towards knowledge sharing	Mean	SD	Factor
Knowledge sharing is good	1.03	0.298	0.920
Knowledge sharing is pleasant	1.03	0.278	0.486
Knowledge sharing is valuable	1.01	0.228	0.447
Knowledge sharing is enjoyable	1.02	0.236	0.258
Knowledge sharing is beneficial	1.03	0.257	0.173
Determinant of correlation matrix	-	-	0.025
KMO and Bartlett's test (significance level)	-	-	0.000

The second group of the independent variables (Attitude towards knowledge sharing) consists of those who perceive that sharing knowledge is good, those who perceive that sharing their knowledge is pleasant, those who feel that sharing knowledge is valuable, those who feel that sharing their knowledge is beneficial and those who feel that sharing their knowledge is enjoyable. Within this group, the first factor was loaded on 'sharing knowledge with colleagues is good'; it had an Eigen value of 3.436 which indicates that the variable is sufficient to represent this group. More so, it had the highest loading of 0.920 and the total variance explained is 68.727%.

Table 4.3: Principal Component Analysis on Subjective Norm

Subjective Norm to knowledge sharing	Mean	SD	Factor
My head of department thinks that I should share my knowledge	1.41	0.724	0.673
My colleagues who are important to me share their knowledge	1.05	0.275	0.462
My head of department influences my decisions to share my knowledge	1.65	0.886	0.648
My colleagues who are important to me think that I should share my knowledge	1.11	0.353	0.590
My colleagues whose opinion I value share their knowledge	1.06	0.300	0.438
My mentor(s) think that I should share my knowledge with my colleagues	1.30	0.623	0.438

My colleagues whose opinions I value would approve of my behaviour to share knowledge	1,03	0.201	0.398
Determinant of correlation matrix	-	-	0.230
KMO and Bartlett's test (significance level)	-	-	0.000

'My head of department thinks that I should share my knowledge', 'My colleagues important to me share knowledge', 'my head of department influences my decisions to share knowledge', 'colleagues important to me think that I should share knowledge', 'colleagues whose opinions I value share knowledge', 'My mentor thinks that I should share knowledge' and 'colleagues opinions influences knowledge sharing', constitutes the third group of the independent variables. Two factors were used to represent this group; 'My head of department thinks that I should share my knowledge' and 'my colleagues who are important to me share their knowledge' had Eigen values of 2.652 and 1.258 respectively. They were computed into a single variable and used to represent this group.

Table 4.4: Principal Component Analysis on Perceived Behavioural Control

Perceived Behavioural Control	Mean	SD	Factor
If I wanted to, I could share my knowledge with my colleagues	1.02	0.210	0.886
It is easy for me to share my knowledge with my colleagues	1.06	0.300	0.925
It is always possible for me to share my knowledge with my colleagues	1.05	0.288	0.775
I believe I have more control over my colleagues if I share my knowledge	1.60	0.890	0.178
It is up to me whether I share my knowledge with my colleagues	1.03	0.264	0.341
Determinant of correlation matrix	-	-	0.143
KMO and Bartlett's test (significance level)	-	-	0.000

The fourth group of independent variables (perceived behavioural control) includes 'If I wanted to, I could share my knowledge with my colleagues', 'It is easy for me to share my knowledge with my colleagues', 'It is always possible for me to share my knowledge with my colleagues', 'I believe I have more control over my colleagues if I share my knowledge' and 'It is up to me whether I share my knowledge with my colleagues'. The first factor was loaded on 'If I wanted to, I could share knowledge with colleagues' with an Eigen value of 2.755 indicating that this variable is sufficient to represent this group.

Table 4.5: Principal Component Analysis on knowledge sharing intentions

Knowledge sharing intentions	Mean	SD	Factor
I will always make an effort to share my knowledge with my colleagues	1.04	0.290	0.927
I intend to share my knowledge with my colleagues	1.03	0.277	0.776

I will try to share my knowledge with my colleagues	1.05	0.330	0.757
I am willing to share my lecture notes and other academic resources with my colleagues	1.06	0.317	0.492
I intend to share my knowledge with my colleagues who ask for it	1.04	0.270	0.182
I always plan before I share my knowledge with my colleagues	1.16	0.544	0.200
Determinant of correlation matrix	-	-	0.015
KMO and Bartlett's test (significance level)	-	-	0.000

The first group of dependent variables (Knowledge sharing intentions) constitutes 'making an effort to share knowledge with colleagues', 'intention to share knowledge with colleagues', 'making an effort to share knowledge with colleagues', 'willing to share lecture notes and other academic materials with colleagues', 'intention to share knowledge with colleagues who will ask for it and planning before sharing knowledge with colleagues'. The first factor was loaded on 'making an effort to share with colleagues' (0.927) which had an Eigen value of 3.766 and a total variation of 62.767%. This indicates that this variable is sufficient to represent this group.

Table 4.6: Principal Component Analysis on knowledge sharing behaviour

Knowledge sharing behaviour	Mean	SD	Factor
I actively share my knowledge with my colleagues	1.02	0.272	0.854
I usually spend time sharing knowledge with my colleagues	1.07	0.389	0.720
I voluntarily share my knowledge with my colleagues	1.03	0.303	0.616
I usually involve myself in academic discussions that will benefit my colleagues	0.99	0.149	0.351
Determinant of correlation	-	-	0.288
KMO and Bartlett's test (significance level)	-	-	0.000

The second group of dependent variables (Knowledge sharing behaviour) includes 'spending time to share knowledge with colleagues', 'actively sharing knowledge with colleagues', 'getting involved in academic discussions that will benefit colleagues' and 'voluntarily sharing knowledge with colleagues'. The first factor (0.854) was loaded on actively sharing knowledge with colleagues with an Eigen value of 2.416 and a total variation of 60.395%. This indicates that this variable is sufficient to represent this group.

Table 4.7: Result Summary

Structural Path	Standardised Coefficient	Hypothesis Testing
Enjoyment in Helping others intention to KS	0.308**	Supported
Knowledge self-efficacy intention to KS	0.523**	Supported
Attitude intention to KS	0.245**	Supported
Subjective Norm intention to KS	0.187*	Supported
Perceived behavioural control intention to KS	0.284**	Supported
Intention to KS Actual KSB	0.107	Not Supported

KS -----knowledge sharing

*p < 0.01, **p<0.001

Hypothesis 1: there is no significant relationship between intrinsic motivation and academics' knowledge sharing intentions.

The result in table 4.1 shows that there is a positive and a weak correlation (correlation coefficient which is $r = 0.308$, $p=0.000$) between enjoyment in helping others and academics intention to KS. It also shows a significant slope ($B=0.3666$). Hence, we reject the null hypothesis and accept the alternate hypothesis. Therefore, there is a weak and significant relationship between enjoyment in helping others and academics intention to KS.

There is also a positive and strong correlation ($r = 0.523$, $p=0.000$) between knowledge self-efficacy and academics intention to KS. It also shows a positive and significant slope ($B=0.788$). The alternate hypothesis is thus accepted. Therefore, there is a strong and a significant relationship between knowledge self-efficacy and academics intentions to KS

Hypothesis 2: there is no significant relationship between attitude academics' knowledge sharing intentions.

The result in table 7 shows that attitude towards KS gave a positive correlation ($r=0.235$) with the intention to share knowledge which is significant at $p<0.05$. Therefore, the null hypothesis is rejected. This means that there is a significant relationship between academics' attitude to academics' intentions to share knowledge.

Hypothesis 3: there is no significant relationship between subjective norm and academics' knowledge sharing intentions.

The result in table 7 shows a positive and very weak correlation ($r=0.187$, $p=0.02$) between subjective norm and academics intentions to share knowledge and also shows a significant slope ($B=0.066$). Hence, the null hypothesis is rejected implying that there is a very weak but a significant relationship between subjective norm and academics intentions to share knowledge.

Hypothesis 4: there is no significant relationship between perceived behavioural control and academics' knowledge sharing intentions

From table 7 above, there is a positive and very weak correlation ($r=0.284$, $p=0.000$) between behavioural control and academics intention to share knowledge. The results also show that the slope is both positive and significant ($B=0.330$). Hence, we accept the alternate hypothesis. Therefore, there is a very weak and positive relationship between perceived behavioural control and academics intentions to share knowledge.

Hypothesis 5: there is no significant relationship between intention to share knowledge and academics actual knowledge sharing behaviour

From table 7, the result shows that there is no significant relationship ($r=0.107$, $p=0.078$) between academics intentions to share knowledge and academics actual knowledge sharing behaviour. Therefore, the null hypothesis is thus accepted. This implies that there is no significant relationship between intention to share knowledge and the knowledge sharing behaviour of academics'.

5.0 Discussions of Findings.

The result of this study shows that there is a positive relationship between enjoyment in helping others and academics intentions to KS. This finding is supported by Lin (2007) who carried out a survey of fifty large organisations in Taiwan and discovered that there was a positive relationship between enjoyment in helping others and intentions to share knowledge. Wasko and Faraj (2000) also explained that knowledge contributors gain enjoyment through altruism and such enjoyment evolve from helping others (Ba, 2001). Knowledge owners who feel the enjoyment in helping others are keen to contribute to KS.

The study also shows that there is a significant relationship between knowledge self-efficacy and academics intention to KS. Li et al (2010) corroborated this in their study when they revealed that there is a significant relationship between knowledge self-efficacy and academics intention to share tacit knowledge. Moreover, they noted that self-efficacy is the core variable of controlling and arousing human's motivation and behaviour. Hsu (2006) proved that one's knowledge self-efficacy has a positive influence on intentions to KS in a virtual community.

Findings from this study show that there is a positive relationship between attitude and academics intentions to KS. The result agreed with Sihombing (2009) who explained that attitude has a positive relationship with intentions to KS. Moreover, this study somewhat agrees with Ryu et al. (2003) who found out that physicians' attitudes toward KS affected their KS intentions. In a survey of managers in twenty-seven Korean organisations carried out by Bock et al. (2005), they discovered that there was a significant relationship between attitude and intention to KS.

This study also corroborated Lin (2007) who proved that there is a positive relationship between attitudes and intentions to KS. Hassandoust and Perumal (2011) showed that attitude towards KS greatly influenced online KSB of a university in Malaysia. This is also corroborated by the findings of Ellahi and Mushtaq (2011) as cited by Olatokun and Nneamaka (2012) who confirmed that the attitude of bloggers towards KS significantly affected their intentions to share knowledge in blogs. Also, a study carried out by Olatokun and Nneamaka (2012) confirmed that lawyers' attitude significantly influenced their intentions to share knowledge.

The results from this study reveal that there is a positive relationship between SN and academics intentions to KS. A survey conducted by Bock et al. (2005) indicated that based on a sample of twenty-seven Korean organisations, SN had a significant relationship with KS intention. Raaij and Schepers (2006) conducted a survey of Chinese participants in an executive MBA program and found that SN had a positive relationship with the use of virtual learning communities. On the contrary, this result does not support the study carried out by Sihombing (2009) who found no significant relationship between SN and intentions to KS.

The results from this study indicate that there is a positive relationship between PBC and academics intention to KS. . Ryuet al. (2003) corroborated this finding when they revealed that there is a positive and significant relationship between PBC and intentions to share knowledge.

Surprisingly, this study reveals that there was no significant relationship between intentions to KS and KSB. This agreed with Olatokun and Nneamaka (2012) who found out that there was no significant relationship between intentions to KS and actual KSB of lawyers. Armitage and Conner (2001) explained that intentions may not always have a positive relationship with behaviour because the mere formation of an intention was insufficient to predict behaviour and intentions do not always predict behaviour.

This deviated from the findings of Ellahi and Mushtaq (2011) as cited by Olatokun and Nneamaka (2012) that the intention to KS was positively related with actual KSB in blogs. The intention of bloggers to share their knowledge was a strong predictor of their actual knowledge sharing in blogs. This premise was not supported by the findings of this study.

This study is somewhat different from the studies carried out Bock and Kim (2002) where they reported that intention to share knowledge and KSB are highly correlated

Conclusion and Recommendations

This study provided empirical data on academics KSB in Nigerian premier university. Knowledge sharing is vital for the success of knowledge management in organisations, universities inclusive. Hence, this study reveals that attitude, SN, PBC, knowledge self-efficacy and enjoyment in helping others positively influenced KSB. Contrary to positions in literature, intentions to share knowledge did not influence KSB. Invariably, this means that there may be external factors that do not allow intentions to be translated into actual behaviour.

The following recommendations are suggested:

1. The management of the University of Ibadan should not place premium on rewarding those that share knowledge only because they want to write journal articles but there should also be an avenue to reward those who share knowledge because they have the passion for it.
2. The management of the University of Ibadan can also carry out a study to find out why intentions to share knowledge did not influence actual KSB and take appropriate steps to correct any anomalies within the university system
3. Further studies may be carried out to unravel other factors that could influence knowledge sharing, apart from those investigated in this study. Also, the influence of socio-demographic factors on knowledge sharing could be determined. It may also adopt other research models to carry out future studies.

References

- Abdullah, R., Selamat, M., Jaafar, A., Abdullah, S. and Sura, S. (2008). An Empirical study of knowledge management system implementation in public higher learning institution. *International Journal of Computer Science and Network Security*.8(1), 281-290.
- Adogbeji, O. and Toyo, D. (2006). *The impact of the internet on Research: the experience of Delta State University, Nigeria. Nigeria Library Philosophy and practice*. (Internet).
Libr.unl.edu:2000/LPP/1ppv8n2.htm. 20th September, 2010.
- Aduwa-Ogiegbaen, S. (2005). Extent of faculty members' use of internet in the University of Benin. *Journal of Instructional Psychology*. 32(4), 269-276.
- Ahmad, A. and Khan, H. (2008). *The importance of knowledge management practices in overcoming the global software challenges in requirements understanding*. (Master thesis), school of Engineering, Blekinge Institute of Technology, Sweden, 60p.
- Ajzen, I. (1991). The Theory of Planned Behaviour. *Organizational Behaviour and Human Decision Processes*. 50(2), 179-211.
- Ajzen, I. and Fishbein M. (1980). *Understanding attitudes and predicting social behaviour*. New Jersey: Prentice Hall.
- Alavi, M. and Leidner, D. (2001). Knowledge management and knowledge management systems: Conceptual foundations and research issues. *MIS Quarterly*. 25(1), 107-136.
- Antal, A. and Richebe, N. (2009). A passion for giving, a passion for sharing: understanding knowledge sharing as a gift exchange in academia. *Journal of Management Inquiry*. 18(1), 78-95
- Armitage, C.J. and Conner, M. (2001). Efficacy of the Theory of Planned Behaviour: a meta-analytic review. *British Journal of Social Psychology* 40,471-499.
- Ba, S. (2001). Research commentary: introducing a third dimension in information systems design- the case of incentive alignment. *Information Systems Research*. 12(3), 225-239.

- Bartol, K. and Srivastava, A. (2002). Encouraging knowledge sharing: the role of organizational reward systems. *Journal of Leadership and Organization Studies*. 9(1), 64-76.
- Basu, B. and Sengupta, K. (2007). Accessing success factors of knowledge management initiatives of academic institutions- a case of an Indian business school. *The Electronic Journal of Knowledge Management*. 5(3), 273-282.
- Bhatt, G. (2001). Knowledge management in organizations: examining the interaction between technologies, techniques and people. *Journal of Knowledge Management*. 5(1), 68-75.
- Bock, G, Zmud, R., Kim, Y. and Lee, J. (2005). Behavioural intention formation in knowledge sharing: examining the roles of extrinsic motivators, socio-psychological forces and organizational climate. *MIS Quarterly*. 29(1), 87-111
- Bock, G. and Kim, Y. (2002). Breaking the Myths of Rewards: an Exploratory Study of Attitudes about Knowledge Sharing. *Information Resources Management Journal*. 15(2), 14-21
- Cabrera, A. and Cabrera, F. (2002). Knowledge sharing dilemmas. *Organization Studies*. 23(5), 687-710.
- Cheng, M., Ho, J. and Lau, P. (2009). Knowledge sharing in academic institutions: a study of multimedia university, Malaysia. *Electronic Journal of Knowledge Management*. 7(3), 313-324.
- Chivu, I. and Popescu, D. (2008). Human resources management in the knowledge management. *Revista Informatica Economica Nr. 4(48)*, 54-60.
- Choi, S., Young, S. and Lee, H. (2008). The Effects of Socio-technical Enablers on Knowledge Sharing: an Exploratory Examination. *Journal of Information Science*. 34(5), 742-754
- De Vries, R., van den Hooff, B. and de Ridder, J. (2006). Explaining knowledge sharing: the role of team communication styles, job satisfaction and performance beliefs. *Communication Research*. 33(2), 115-135.
- Ehikhamenor, F. (2003). Internet facilities: use and non-use by Nigerian university scientists. *Journal of Information Science*. 29(1), 35-48.
- Enakrire, R. and Ndubusi, G. (2012). The effect of tacit knowledge for effective teaching and learning processes among lecturers at the Delta State University, Abraka. *Library Philosophy and Practice*. <http://digitalcommons.unl.edu/libphipprac/> Assessed on 12th October, 2012
- Hair, J., Black, W., Babin, B., Anderson, R., and Tatham, R. (2006). *Multivariate Data Analysis*. New Jersey: Pearson Education Inc.
- Hassandoust, F. and Perumal, V. (2011). Online knowledge sharing in institutes of higher learning: A Malaysian perspective. *Journal of Knowledge management practice*. 12(1). Accessed on 12th October, 2012 from <http://www.tlinc.com/articl247.htm>
- Hsu, I. (2006). Enhancing employee tendencies to share knowledge- case studies of nine companies in Taiwan. *International Journal of Information Management*. 26, 326-338.
- Li, Z., Zhu, T., and Wang, H. (2010). A study on the influencing factors of the intention to share tacit knowledge in the university research team. *Journal of software*. 5(5), 538-545
- Lin, H. (2007). Effects of extrinsic and intrinsic motivation on employee knowledge sharing intentions. *Journal of Information Science*. 33(2), 135-149.
- Lin, H., Lee, H. and Wang, D. (2009). Evaluation of Factors Influencing Knowledge Sharing based on a Fuzzy AHP Approach. *Journal of Information Science*. 35(1), 25-44.
- Martin, J. and Marion, R. (2005). Higher Education, leadership roles in knowledge processing. *The Learning Organization*. 12(2), 140-151.
- Mathis, R. and Jackson, J. (2006). *Human Resource Management*. Mason: Thomson South Western, 606p.

- Mchombu, K.J. (2007). Harnessing knowledge management for Africa's transition to the 21st century. *Information Development*. 23(1), 25-42
- Mphidi, H. and Synman, R. (2004). The utilisation of intranet as a knowledge management tool in academic libraries. *The Electronic Library*. 22(5), 393-400.
- Olatokun, W.M. and Nneamaka, E. I. (2012). Analyzing Lawyers attitude towards knowledge sharing. *South African Journal of Information Management*. 14(1). <http://www.sajim.co.za/index.php/SAJIM/rt/printerfriendly/507/581>. Assessed on 12th October, 2012
- Raaij, E. and Schepers, J. (2008). The acceptance and use of a virtual learning environment in China. *Computers and Education*. 50(3), 838-852
- Ryu, S., Ho, S. and Han, I. (2003). Knowledge Sharing Behaviour of Physicians in Hospitals. *Expert Systems with Applications*. 25(1), 113-122.
- Schultze, U. and Leidner, D. (2002). Knowledge management in Information systems research: Discourses and theoretical assumptions. *MIS Quarterly*. 26(3), 213-242
- Sharrat, M. and Usoro, A. (2003). Understanding knowledge sharing in online communities of practice. *Electronic Journal of Knowledge Management*. 1(2), 187-196.
- Sihombing, S. (2009). Faculty Perceptions of knowledge sharing behaviour. *Proceeding PESAT*. 3: 6-15.
- University of Ibadan (2010). Academic Staff List of the University of Ibadan. Unpublished document from the office of the Deputy Registrar.
- Van den Hooff, B. and De Ridder, J. (2004). Knowledge sharing in context: the influence of organizational commitment, communication climate and CMC use on knowledge sharing. *Journal of Knowledge Management*. 8(6), 117-130.
- Wah, C., Menkhoff, T., Loh, B. and Evers, H. (2007). Social capital and knowledge sharing in knowledge-based organizations: an Empirical study. *International Journal of Knowledge management*. 3(1), 29-48
- Wasko, M. and Faraj, S. (2000). It is what one does: why people participate and help others in electronic communities of practice. *Journal of Strategic Information Systems*. 9(2), 155-173
- Widden-Wulff, G. and Ginman, M. (2004). Explaining knowledge sharing in organizations through the dimension of social capital. *Journal of Information Science*. 30(5), 448-458
- Yang, B. (2003). Towards a Holistic theory of knowledge and adult learning. *Human Resource Development Review*. 2(2), 106-129.
- Yang, C. and Chen, L. (2007). Can organizational knowledge capabilities affect knowledge sharing behaviour? *Journal of Information Science*. 33(1), 95-109.

Tackling Aliteracy in Nigerian Secondary Schools: A Role for School Libraries

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Introduction

Aliteracy the capacity to read but choosing not to do so is one of the most vexing problems facing secondary educators today. Adolescents who, for whatever reasons are not motivated to engage with school related reading can be said to be alliterates in that domain. These are the students for whom reading seems irrelevant, not worth their time or effort. (Alvermann, 2007). It is a reading problem which occurs when reading ability can no more be matched by reading desire. In other words, a literate person now sees reading as a chore or a task rather than as a pleasure. It implies the ability to read but an indifference and boredom with reading for academic and enrichment purposes. (Olufowobi and Makinde, 2011). It is lack of reading habit in capable readers.

The word aliteracy was first used by Boorstin, J. Daniel, a media ecology and the Librarian of Congress in 1984 in his book titled "Books in our future" when he was analyzing the statistics of American where only 50% of them read at that time as he gave a clear difference between aliteracy and illiteracy (Wikipedia).

The recurrent mass failure recorded by secondary school students in external examinations can be traced to aliteracy. Declining WAEC and NECO scores and grade inflation are two indicators that secondary school students are not made of the same academic stuff as past generations. Blame is laid at everyone's doorstep; lazy students, seductive media and technology, ineffective teachers, careless parents and apathetic government. However, despite the fact that students appear underprepared, they can read. They have the skills but they are not reading. (Latty, 1996).

With every passing year, the largely unseen epidemic of aliteracy is sweeping the country's educational future, with the likelihood of crippling the country's future. For this reason, it demands to be addressed with utmost immediacy and care as students are developing increased apathetic attitude to reading and learning. If teachers and parents ignore the warnings of this widespread lack of interest in reading, it is to invite disaster for our children and our future.

Below is the table of students' performances in the two major Secondary School Certificate Examinations (SSCE) i.e. WAEC and NECO in Nigeria between 2003 and 2011 according to social statistics from National Bureau of Statistics.

Table1: Students' performance in WAEC and NECO (2003-2011)

YEAR OF THE EXAM	MONTH OF THE EXAM	EXAM BODY	% AVERAGE WITH CREDIT IN FIVE SUBJECTS INCLUDING ENGLISH AND MATHS
2003	MAY/JUNE	WAEC	19.26
2004	MAY/JUNE	WAEC	18.26
2005	MAY/JUNE	WAEC	18.68
2006	MAY/JUNE	WAEC	9.32
2007	MAY/JUNE	WAEC	7.69
2008	MAY/JUNE	WAEC	9.29
2009	MAY/JUNE	WAEC	24.99
2010	MAY/JUNE	WAEC	13.27
2011	MAY/JUNE	WAEC	30
2012	MAY/JUNE	WAEC	38.8
2003	JUNE/JULY	NECO	27.42
2004	JUNE/JULY	NECO	16.47
2005	JUNE/JULY	NECO	9.51
2006	JUNE/JULY	NECO	27.12
2007	JUNE/JULY	NECO	30.51
2008	JUNE/JULY	NECO	56.09
2010	JUNE/JULY	NECO	25.00
2011	JUNE/JULY	NECO	24.9

Sources: (i) National Bureau of Statistics (Social Statistics 2009)

(ii) Nigerian newspapers

According to a report credited to Professor AngoAbdullahi, the chairman Governing Council Bauchi State University in Punch Newspaper of 9th February 2012 that out of 18000 students that sat for WAEC and NECO in Gombe State in 2011 only 17 students passed with enough credits to qualify for University admission.

Ilogho(2011) asserted that Nigeria can become a major force in Africa and indeed the world, if proper policies and structures are in place to entrench good reading culture.

The problem of aliteracy among secondary school students is growing. Stakeholders need to spark and reinforce reading in all subject areas. Technology is tearing our young people away from the good habit of reading. Technology such as television; computer and internet are gradually replacing reading as an accepted form of entertainment and information getting.

There is a strong positive correlation between healthy reading habits and academic success. Lawal(2008) opined that reading is the major key to progress in learning; inability to read well which is related to poor reading attitude and interest make the children fall progressively further and further behind other members of the class.

The performance of students in examinations is related to the intensity of reading i.e. the number of books students read, how often they read, how much free time they devote to reading, how long they read and the length or number of books.(Bachmuskaya and Yankova,1996)).

There is strong positive correlation between healthy reading habit and academic success. Aliteracy is rampant among adolescents. Boys and girls in secondary schools become involved with many things that can distract them from reading such as computer and video games, extracurricular activities, the internet, sports and unsupervised television viewing to mention a few.

According to Ilogho (2011), aliterates are more prone to watching TV, home videos, playing computer games, and engaging in a peer group discussion in preference to reading books, magazines news papers, etc.

Statement of Objectives

- Identify aliteracy among secondary school students in Nigeria
- Examine factors contributing to the making of aliterates in our secondary schools.
- Examine the roles of school libraries in tackling aliteracy
- Emphasise the roles of teachers in solving reading problems in the secondary schools
- Highlight the roles of parents in promoting reading among secondary school students.

Literature Review

Aliteracy among Secondary School Students

In his analysis of aliteracy, Beers (1996), identified three distinct types of alliterates. They include:

Dormant readers are those who like to read and consider themselves readers but don't like to read right now. Aliteracy for this group is not related to a negative attitude towards reading but rather to outside factors which seems more pressing such as sports, social life and school work.

Uncommitted readers are opened to the idea of learning to enjoy books more in the future and may have positive feelings about other readers. They have a negative attitude towards books, they don't like to read and define reading as a skill rather than pleasurable activity.

Unmotivated readers have no future plans to begin reading and have negative feelings toward people who can read.

Mackey and Johnson (1996) identified another type of alliterates referred to as reluctant readers. Reluctant readers may not know that reading is enjoyable.

According to him, resistant readers are stimulated very little by assigned readings and are more at ease with short texts related to their subject of interests.

Lebrun and Pelletier(2005) identified other types of alliterates as impulsive readers who browse through a number of books with little or no concentration and selective readers who are not interested in current events and they are not interested in details. Struggling readers resist reading or are apathetic about it.

The growing disengagement of adolescent students is reaching a crisis threshold and if students are to successfully navigate the transitions from middle school through high school and the work place, they need to be engaged as readers throughout this epic journey. There is downward trend in voluntary reading by youths at the secondary schools over the past two decades. (Averman et al 2007).

Humphrey (2008) asserted that teachers are encountering more and more students who are uninterested in learning. In fact some students begrudge even opening up their books whether it be to read, spell, or solve mathematical problems, These negative attitudes are believed by many teachers to have a significant bearing on the students' ability to perform well in any given examination.

Factors Contributing to Aliteracy

The following factors according to Humphrey (2008) contribute to the making of alliterates in our secondary schools.

- Many secondary students are not excited by ideas presented in books. They prefer to experience life directly rather than through reading.
- Many secondary school students are unable to sit long still enough to read for prolonged period of time.
- Secondary school students most of which are teenagers are too self-absorbed and preoccupied with themselves, their problems, families and sexual roles to make connection between their world and books.
- Persistent stress from home and schools to read is constantly counterproductive for some secondary school students.
- Some secondary school students may grow up in non-reading homes with no reading role models. There is no one to pass down the value of reading.
- Many students at this level equate reading with ridicule, failure or exclusively school-related tasks.
- Some students may consider reading solitary and anti-social.
- Educators i.e. Teachers only teach the subjects, they do not teach the students to teach and there no reading teachers in many of our secondary schools.
- For some students, according to Ilogho (2011), reluctance to read may be part of a generalized resistance to perceived requirements or expectations.

The Role of School Libraries

The school library is the cornerstone of the school community integral to teaching and learning. By providing teachers and students with a full range of print and electronic resources to support learning, the school library enhances students' achievement.

A well-stocked and well-staffed school library has a positive impact on students' achievement regardless of the socio-economic or educational level of the community.

School libraries provide teachers and students with a current collection of multi-perspective and multi-format resources aligned with the local curriculum and international academic standards. This collection forms the core of the schools' information infrastructure and serves as a gateway to the world beyond the classroom. (Lance 2006). There is a close relationship between reading and school libraries. The one place where schools can count on engaging students with books is the school library. Books in the school library must appealing and be current to ensure that students will read them.

School libraries are places of opportunity where all students can strive for and achieve success with the help of professional school librarians who teach the information skills and strategies students need to become effective consumers of ideas and information.

School libraries promote equal access to resources thus leveling the academic playing field for children of low income parents who do not have access to books and other learning resources outside the school,

thus helping to close the achievement gap for these students and providing access to a broad range of print and electronic resources. They also afford access to materials that work together with classroom resources to enhance and extend the learning experience, when the school librarians work with classroom teachers on co-operative and collaborative projects, students develop a lifelong love of reading and become skilled users of ideas and information. (Njoku, 1999). Therefore if schools are to close the achievement gap and increase academic achievement for all students, they need strong school libraries. Effective school libraries are a cost efficient way to provide students with the skills and knowledge they will need to achieve in the twenty-first century.

Humphrey (2008) pointed out that in spite of all our techno wonders, there is no substitute for books when it comes to encouraging reading and expanding imagination. Without access to books, academic success among students most definitely suffers. School libraries are keys to improving reading, the better the school libraries, the better the school result in both internal and external examinations, therefore attention to school libraries must be an integral component in any plan for improvement in examination results.

The school libraries should be staffed by professional librarians who are familiar with the books students like and trained to engage students in a variety of reading materials. According to Abdullai (1998) the library must be accessible; the students should have all the freedom they desire to scan through the shelves, which not only expose but give them confidence to come of age as learners to stand on their feet to possess autonomy for selection and direction in order to collect information relative to solution of a problem.

Ahmed (1996) asserted that school library helps to update knowledge and improve the standard of teaching and learning. In the light of this, school administrators should ensure they establish good libraries in schools and colleges instead of the usual conversion of a small classroom into a library.

The position of school library is becoming more important than ever before particularly at this period when the average Nigerian parents could not afford to purchase required textbooks for their children. He identified such things as location of the library and its facilities, quality of staff, adequate acquisition of books, good organization and arrangement of books and opening hours as factors that facilitate effective use of school libraries.

Lance (2006) found out in a research that performance of students in their academics depends on the level of development of the school library. In a study carried out in three states in the United States of America (Alaska, Colorado and Pennsylvania), she observed that where school libraries are better staffed, better stocked, and better funded, academic achievement tends to be higher.

However, the problem with school libraries is a nationwide problem and it contribute to the problem of illiteracy now rampant among the secondary school students.

In this era of technology, the school library should move from provision of access to reading materials to provision of access to Information and Communication Technology (ICT). There must be provision of computer laboratories with computer workstations and internet connections thereby providing information and ideas that are fundamental to functioning successfully in today's information and knowledge-based society. (Halsey, 2008)

A well equipped school library with audio –visual facilities such as video and cassettes, radio and television would capture the interests of the students more and could even help in weaning them away from anti-social acts and to explore the modern world of technology.

Information resources in the school libraries

Halsey (2008) opined that the school libraries should maintain collection in a variety of media. In addition to books, magazines and newspapers, the school libraries may contain photographs, films, sound and video recordings, computers, CD-ROMs and maps; periodicals and other media. The school libraries should equip the students with life-long learning and develop their imagination enabling them to live as responsible citizens.

Secondary school libraries should have good materials for secondary education on adventure, sports, careers, and mystery fiction on sciences and humanities. Reference books such as maps, atlases,

dictionaries, encyclopedia, handbooks, yearbooks, subject bibliography and directories of local and state governments must be available in the school libraries.

According to Abdullai (1998), in the process of selecting information resources for the school libraries the school librarians must consider the type of readers, their needs and interests the teaching interests of teachers and the target group i.e. the physically challenged among the students. The collection of secondary school libraries must generally be capable of supporting instruction in Mathematics, Sciences and Technology, Social Sciences, Humanities and Foreign Languages.

The Role of Parents

Most families are involved when the children participate in activities such as vocal and instrumental music or sports but are less involved in their schools. Adolescence is a stage when continued support due to physical and emotional changes and more difficult school work.

Academic success is very dependent on what happens in homes. Schools provide the opportunity to learn reading skills. It is therefore worthwhile for schools to encourage family involvement. Children who grow up with non-reading parents in a home that is devoid of reading materials are much more likely to grow up as aliterates. (Humphrey, 2008).

Parental reading habit is a major influence on the reading habit of their children; children with positive attitude towards reading had parents who spent a lot of time firmly planting the notion that reading is an enjoyable worthwhile activity. The most positive influence on the students' reading attitudes came from their parents. Students take note of their parents' reading behavior and emulate them.

Many parents do not present themselves as reading models for their children by reading in front of them. Children want to do the things they see their parents do, if they see their parents reading they will read. Families who are actively involved in their children's reading help to increase academic success. Parents ought to ensure that students are encouraged to read during evenings, weekends and school vacations. (Lance, 2006).

Lawal(2008) suggested that illiterate parents should be made aware (through such media as adult literacy programs and Parents' Teachers' Association meetings) of the importance of reading materials for their children.

Humphrey (2008) opined that to encourage the parents to boost reading, the following should be done by authority of secondary schools:

- Involving the PTA in developing and executing a plan.
- Helping parents understand the overall concept of reading and the importance of parental support.
- Encouraging parents to provide access to books, newspapers, and other printed materials in their homes.
- Promoting the use of public libraries by parents and students.
- Providing examples of ways in which parents can help during parents' conferences and meetings.
- Serving as reading role models by reading and discussing books and newspaper articles with their children.
- Developing a summer independent reading program that parents and guardians will monitor and support.

The Role of Teachers

Teachers must see it as responsibility to be committed to developing good reading habit and right attitudes among the secondary school students. (Trelease, 1989)

In the opinion of Medahunsi(2008) teachers should do the best within their abilities to promote reading among the students. They should form reading groups, allocate time for various reading activities and to students of various ability levels.

Glogowki (2008) suggested that the students need to see in their teachers a high level of authentic engagement in reading in order to be encouraged to do the same. Teachers should be committed and enthusiastic readers willing to share their personal stories and reactions with students.

Bojuwoye (2008) asserted that a lot of improvement being sought in our schools depends greatly on the teachers and in particular on their preparation for teaching duties. Reading is imperative to the success of secondary school students; teachers must therefore take it as their teaching duties, promotion of reading among students.

Medahunsi (2008) asserted that it is not enough to teach children how to read, but teachers must teach them to want to read. The objective of the readers should go beyond producing school time readers to raising lifetime readers.

To solve reading problems among secondary school students, teachers must do the following:

- Identify the aliterates in their classes and in the whole school.
- Work one on one with the school librarians to connect the students with books.
- Subject teachers must be familiar with the goods books on their subjects and recommend them to their students.
- Encourage the students to read books on their own.

Conclusion

This is the last opportunity to turn these students away from aliteracy and lead them to become lifelong readers. Secondary school students become involved with many things that can distract them from reading such as computer and video games, extracurricular activities, the internet, sports and unsupervised television viewing to mention just a view. (Hymphrey,2008).

The onus is therefore on the stakeholders (Parents, teachers, school librarians, school administrators) to get secondary school students out of this problem so that the recurrent problem of mass failure can become a thing of the past in our country.

Aliteracy can indeed be tackled if the stakeholders will as a matter of urgency do every possible thing to address this menace.

Recommendations

- (i) From early childhood (right from elementary school) children should be made to realize the importance of reading and dispensability of their success on it.
- (ii) Well equipped school libraries should be established in all public and private secondary schools and they should be managed by trained school librarians.
- (iii) Students must have access to current, appealing, high interest and useful books and other reading materials in their classrooms, homes, public and school libraries and other location within the community.
- (iv) Schools must feature an environment where reading is valued, promoted and encouraged.
- (v) Time should be dedicated in the school time table for reading for a variety of purposes- for pleasure, information and exploration.
- (vi) Teachers must give students assignment and projects that will that will make them read and make use of libraries at regular intervals.

(vii) All adults in schools, at home and across the community must serve as role models and provide guidance to ensure that reading is a priority in young people's lives because high reading achievement flows logically from homes, schools and communities that work together.

(viii) Schools must provide a school wide atmosphere and program to promote independent reading

(ix) In these days of ICT, parents and schools through the school library can use the ICT to promote reading by providing the students with access to useful electronic information resources that can be found on the internet and CD-ROM formats.

(x) Government at the state and federal levels through the respective ministries of education should discourage and if possible completely wipe out the magic centers where students are prepared to pass examinations through examination malpractices without reading.

References

Abdulai, A (1998). The role of libraries in primary and secondary education in Nigeria. *Journal of Teacher Education Today*. Volume 8(1-2): 21-25

Ahmed, A.O (1996). Making effective use of the school library. *Journal of Teacher Education Today* Volume 6 (1 and 2): 38-39

Alechenu, John (2012 February 9) Only 17 students passed WAEC, NECO in Gombe. Retrieved from www.punch.ontheweb.com.

Alvermann (2001). Effective literacy instruction for adolescents (Executive Summary and paper commissioned by The National Reading conference). Retrieved from www.nrconline.org

Bachmustkaya and Yankova (1996). The juvenile: today and tomorrow (Proceedings of the 62nd General Conferences Sponsored by IFLA held between 25th -31st August 1996 at Beijing China) Retrieved from www.ifla.org.

Beers, G.K. (1996). No time, no interest no way! The three voices of aliteracy. *School Library Journal* Volume 42 (1 and 2): 30-33 Retrieved from www.ifla.org.

Bojuwoye, D. (2008). A case study of school related factors affecting Nigerian secondary school students academic performances. Retrieved from www.unilorin.edu.ng

Glogowki, R (2008). Promoting a culture of reading among Kenya High school students. Retrieved from www.teachandlearn.com.

Halsey, R. (2008). Library institution. Microsoft (R) student 2008. Redmond, WA Microsoft Corporation

Humphrey, J. (2008). Engaging students with books and other print materials for a happy and productive life. Retrieved from www.mgrn.evansville.edu.

Ilogho (2011). The rising population of alliterates in Nigerian schools: Role of libraries. *Library Philosophy and Practice*. Retrieved from www.unilb.uni.edu/LPP

Lance, K. (2006). The impact of school library media centers on academic achievement. *School Library Media Research Journal* 22(3): 30-32. Retrieved from www.ala.org

Latty, G.C. (1996). Aliteracy among college students: Why don't they read (Paper Presented At The Annual Meeting Of The College Reading Association) October 31st-November 3rd, 1996). Retrieved from www.eric.ed.

Lebrun and Pelletier (2005). Reading habits of secondary school students. Retrieved from www.mels.com

Mackey, L., and Johnson, T. (1996). The book resisters: Ways of approaching reluctant teenage readers. (Proceedings of the 62nd General Conferences Sponsored by IFLA held between 25th -31st August 1996 at Beijing China) Retrieved from www.ifla.org.

Medahunsi, S.O. (2008). Teachers' belief about reading in four Nigerian States. Retrieved from www.unilorin.edu.ng

National Bureau of Statistics (Social Statistics 2009)

Njoku, I. (1999). The role of libraries in promoting independence in learning. *Journal of Teacher Education Today*. 9 (1 and 2):59-61

Olufowobi, O., and Olanrewaju, M. (2011). Aliteracy: A threat to educational development. *International Research Journal* 2 (2): 824-827

Trelease, J. (1989). Jim Trelease Speaks on Reading Aloud to Children. *The Reading Teacher* 43, (3), 200-206.

An Analysis of the Effect of Diacritical Markings on Index Terms in Some Yoruba Christian Texts

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Introduction

Standard Yoruba orthography demands a heavy use of diacritical marks (sub-dots and tone marks) on some of its characters because of its tonality and to cater for the need to represent speech sounds that are beyond the range of the basic America National Standard Institute (ANSI) characters, such characters are é, è, ò, ó, á, à, è, é, í, ì, ò, ó, ù, ú, ọ, ẹ, and ń, and ñ. However, due to input device challenges, most Yoruba writers adopt inconsistent orthography. Some writers that adopt the inconsistent orthography apply diacritical marks on characters that are beyond ANSI in selected words (partial application). Other writers that adopt the inconsistent orthography do not apply diacritical marks on any of the characters that are beyond ANSI characters. Base characters are used to represent the diacritized versions by writers that do not adopt the standard orthography of the language. For instance, é, è, ò, é and ẹ are all represented with e.

Tokenization and lexical analysis or removal of stopwords is the first step in text processing. As part of this study, a tool which can perform the first step of text processing on the texts of the language was developed. This was to develop IR research for the language that was identified as one of the resource scare languages in the world. Zipf's and Heap's laws were employed to model the index terms created in order to identify some statistical differences or similarities in the samples of texts that adopt the standard orthography and those that do not adopt the standard orthography. Zipf's law was used to model the distribution of index terms, while Heap's law was used predict the size of the vocabulary in the index terms as the size of the text increases. Alexander and Grigori (2001), submitted that Zipf's and Heap's laws' coefficients depend on language. However, this research tested the two laws on the texts of a language, but with different adoptions of its orthographies.

Literature Review

The discrepancies in the morphological rules and linguistic structures of natural languages around the world brought about the need to undertake research and analysis of all languages (Muhirwe, 2007). Yoruba, like most other African languages is under resourced unlike the 'politically and economically significant' languages that enjoy many research outputs. Most of these research outputs are easily accessible unlike few that emanate on African languages. Some of such studies in this decade include Fadillat (2003) that carried out a study on linguistic analysis of Bahasa, an Indonesian language. Leydesdorff and Park (2004) also analyzed Korean texts for automatic indexing. Al-Shammari (2010) also carried out similar research on Arabic texts for stemming. Ahmad, et al (2010) carried out research on morphological analysis of Persian language spoken by Iranian.

Statistical Language Modeling (SLM) has been adopted in Natural Language Processing (NLP) applications to understand some of the properties of human language. Two of the SLMs include Heap's and Zipf's law which have provided empirical evidences that human language texts follow certain universal regularities. There are several studies that have been carried out on natural languages using Zipf's law to model its word occurrences. Shamilov and Yolacan (2006) carried out experiments using different texts of Esperanto, English, French, German, Italian and Spanish. The result showed that the

Zipf's coefficient for the languages is as follows: Esperanto (-0.9204), English (-1.1858), French (-1.0448), German (-0.9745) Italian (-0.9947) Spanish (-0.9255). The findings from the study carried out by Alexander and Grigori (2001) using English and Russian corpora showed that the coefficients of two important empirical statistical laws of language – Zipf's law and Heap's law – are different for different languages. Sajika (2008) also made use of some of the NLP techniques to analyze the Sinhala language to gain a better understanding of the language. However, the result of his experiment showed that the language exhibits Zipfian features, but the Zipf's coefficient was lower than that of English language. Another experiment by Damián and Marcelo (2008) using Zipf's law revealed differences in qualitative features of words distributions in English, Spanish and Latin texts.

Similarly, Alexander and Grigori (2001) used Heap's law for modeling the increase in English and Russian texts vocabulary and they found that Heap's law is language dependent. Equally, Catuto et al (2007) employed Heap's law in analyzing a large-scale snapshot of website del.icio.us and investigated how the number of different tags in the system grows as a function of a suitably defined notion of time. Heaps' Law has also been used as a predictor of the overall vocabulary size using a sample of a fraction of the collection of new words on the World Wide Web by Williams and Zobel (nd). Also, Levy and Sandler (2009) have applied Heaps' law in understanding the growth of application of social tags.

Methodology

Two sets of Yoruba texts were collected. The first set of texts which was collected from Seventh Day Adventists' website; it is not consistent with the standard Yoruba orthography. The first set of texts are regarded as maranatha texts, which do not have diacritical markings. The second set was collected from Jehovah Witnesses' official websites is consistent with the standard Yoruba orthography. The second set of texts are regarded as watchtower texts, they have diacritical markings. Twenty html files containing Yoruba texts were collected from each website.

The texts was prepared for cleaning by copying the texts in the html files into a word processing application where manual removal of all images and English texts from the texts was possible. The word processing files were then saved with the name of the source website plus sequential numbers.

A lexical analyzer was developed by the researcher using java programming language. A list of stopwords from the given texts was compiled and peer reviewed by a local language technologist and a linguist. The stopwords were identified and removed by the lexical analyzer, while tokens that were not stopwords were regarded as index terms. The lexical analyzer read the text from a specified text file and wrote the index terms, in the text, its length or number of characters, its number of times of occurrence and the probability of its occurrence of the index term into text editors file. The content of the text editor file was then copied to a Microsoft excel file.

The index terms that was written into the Microsoft excel file was ranked in decreasing order by the probability of occurrence of the index terms. To obtain Zipf's coefficient, a graph of log values of frequency (Fr) against rank (r) was plotted for the points: $x_r = \log r$, $y_i = \log Fr$. The Zipf's coefficient, Z was obtained as the unstandardized coefficient from the approximated linear curve by the SPSS.

$V(n)$ was estimated as the number of distinct or unique words in each collection, while T is the number of tokens in the collection. The value of $V(n)$ and T are presented on the Microsoft excel spreadsheet application. To obtain Heaps coefficient, a graph of log values of $V(n)$ against T was plotted for the points: $x_r = T \log$, $y_i = \log V(n)$. The parameters K and α were estimated from the graph estimation by SPSS. The coefficients of Heaps law was obtained through the approximated linear curve by the SPSS.

Results and Discussion

Average length of index terms of text from maranatha and watchtower is 4.89 and 4.61 respectively. The average length of words (combination of index terms and stopwords) of the texts from maranatha and watch tower is 3.61 and 3.29 respectively.

The total number of tokens from maranatha is 17,539; with 11,144 (63.53%) stopwords. The total number of tokens from Watchtower is 61,915; with 38,469 (62.13%) stopwords. The highest occurring stopword in maranatha is 'ti', while 'tó' is the highest occurring stopword in watchtower.

According to Fig. 1 and 2, the Zipf's coefficient for the texts from maranatha and watchtower is -1.03 with R^2 value of 0.956 and -0.818 with R^2 value of 0.961 respectively. This reveals that index terms in Yoruba obey Zipf's law but the coefficients are different for different orthographies adopted.

Fig. 1: Zipf's graph for texts from maranatha

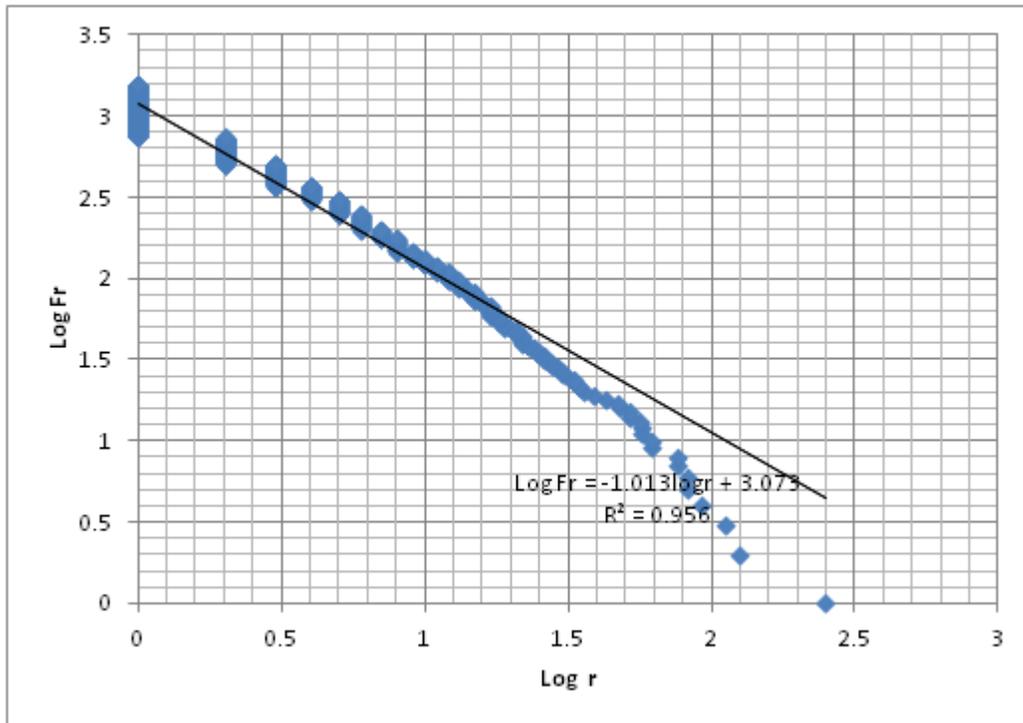
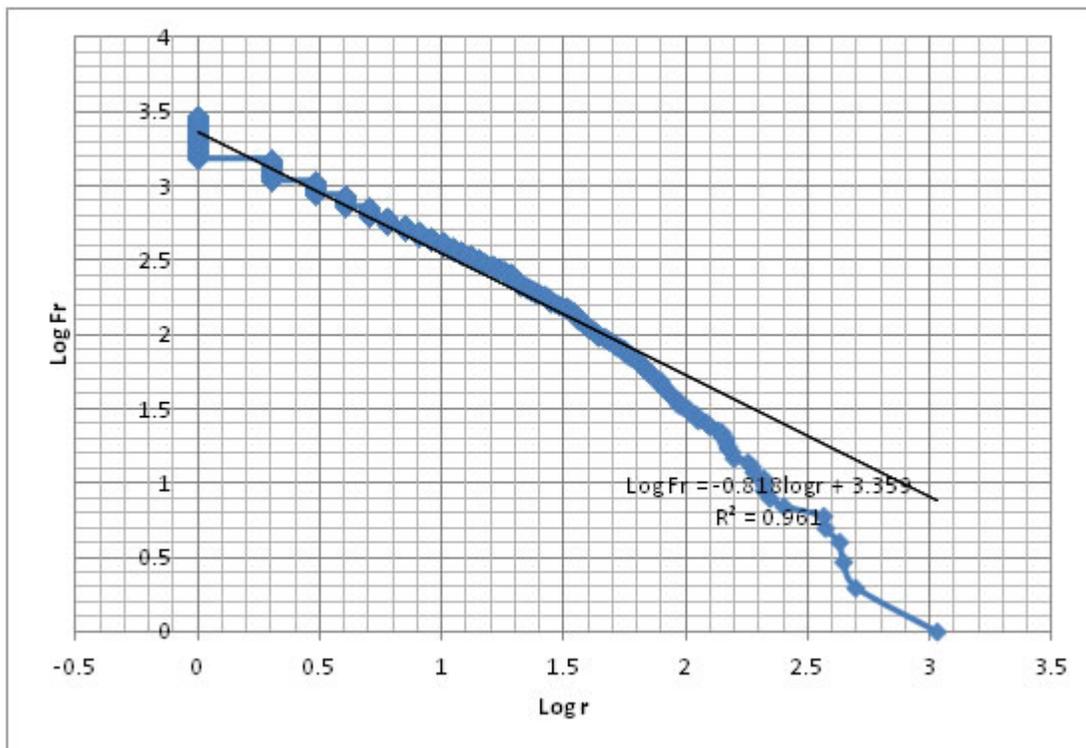


Fig. 2: Zipf's graph for watchtower



Heap's graph for maranatha and watchtower are represented by Fig. 3 and 4. The heap's coefficient for maranatha and watchtower is 0.83 with R^2 value of 0.956 and 0.11 with R^2 value of 0.011 respectively. Although the size of watchtower is higher than that of maranatha, maranatha obeyed Heap's law while watchtower failed heap's law.

Fig. 3: Heap's graph for maranatha

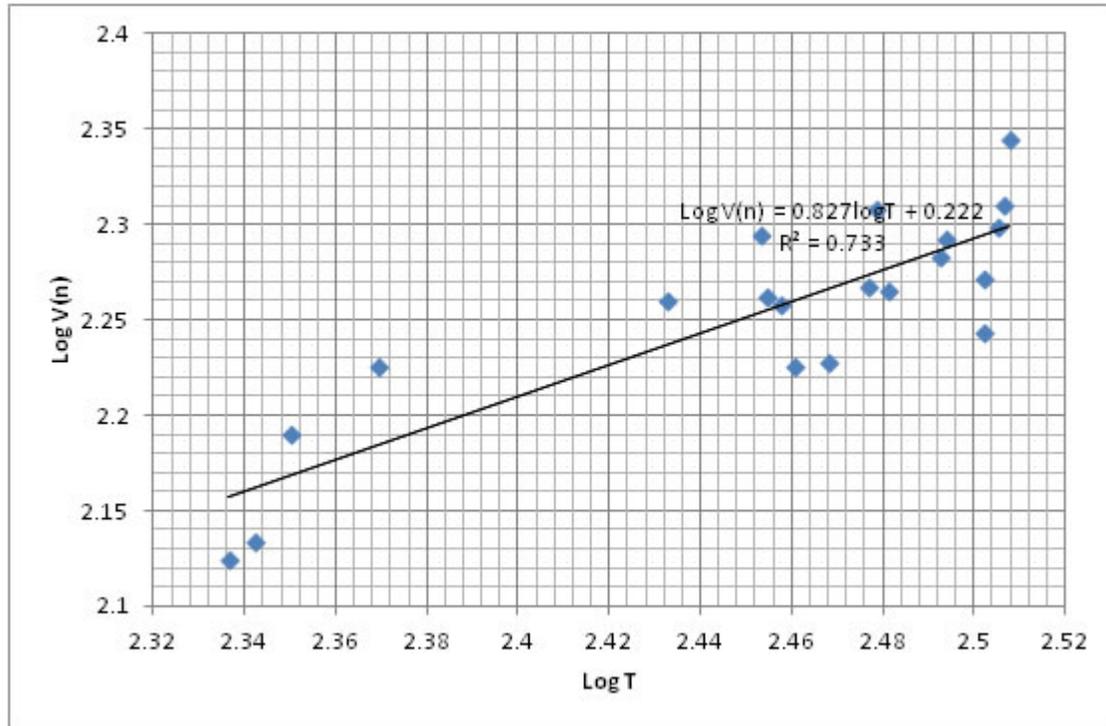
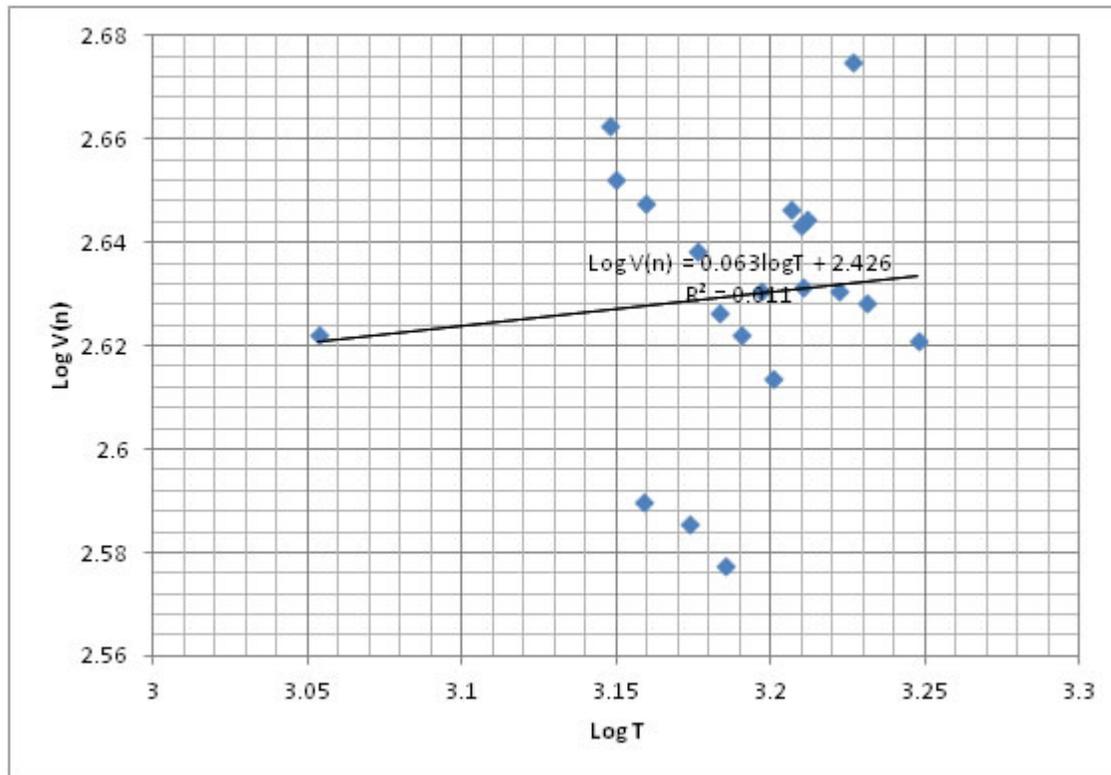


Fig. 4: Heap's graph for watchtower



Recommendations and Conclusion

The use of the diacritical marks have significant effects on the lexical features and statistical distribution of index terms in Yoruba texts. As it occurs in randomly generated words (Wentian, 1992), the index terms in the Yoruba texts examined obeyed Zipf's law, but there were differences in the co-efficients of the two texts which represent the two major adoptions of the orthography of Yoruba language. It was observed therefore that few terms occur very frequently and are therefore more information laden than others. These frequently occurring terms can be best used for classifying the documents. It was also observed that these most frequently occurring words in the texts actually revealed the differences and similarities in the beliefs of the two religious organizations. The coefficients of Heap's law was very different for the two texts. It is note worthy that the watchtower texts which is four times larger than the maranatha texts failed the Heap's law, while maranatha texts obeyed Heap's law. Considering Alexander and Grigori's (2001) observation that Zipf's and Heap's laws' coefficients depend on language, it can be concluded that the Zipf's and Heap's co-efficient of Yoruba texts depends on the orthography adopted.

However, the differences in the average length of words appears not to have been influenced by the usage of diacritical marks. Since the texts with diacritical marks have the same length when the same word is typed without diacritical marks. But the lexical analysis which produced a list of stopwords revealed that salient information were lost permanently in texts without diacritical marks. The loss of meaning in the index terms without diacritical mark is another but more vital observation, this is a major limitation in the use of texts that adopt the inconsistent orthography in IR and other knowledge or information processing applications.

One of the major contributions of the study is the development of an automatic indexer which serves as a good foundation for text processing of Yoruba which is a fundamental step in IR. However, more work would be needed in Yoruba text processing for stemming, index term selection and thesauri development. Another major contribution is the proportion of stopwords to index terms in Yoruba texts. There are indications that the index terms can be used to automatically identify/classify documents by subjects, therefore, research is expected in this regard in Yoruba language. Ultimately, it is recommended that the standard Yoruba orthography should be adopted by Yoruba writers.

References

- Ahmad, Y., Ali, R., Mohammad, R. and Mohammad, M. (2010). Automatic Stemming of Some Arabic Words Used in Persian through Morphological Analysis Without a Dictionary. *World Applied Sciences Journal* 8 (9), pp. 1078-1085.
- Al-Shammari, E. (2010). *Improving Arabic Text Processing Via Stemming With Application To Text Mining And Web Retrieval*. (Doctoral Thesis), Computer Science Department, George Mason University, United States of America. Pp. 23-30.
- Alexander, G. and Grigori, S. (2001). *Zipf and Heaps Laws' Coefficients Depend on Language*. Center for Computing Research (CIC), National Polytechnic Institute (IPN), Av. Juan Dios Batiz s/n esq. Mendizabal, col. Zacatenco, CP 07738, DF, Mexico. pp.1-4.
- Catuto, C., Baldassarri, A., Servedio, P. and Loreto V. (2007). *Vocabulary growth in collaborative tagging systems*. (Internet), <http://arxiv.org/abs/0704.3316v1>, 4th August 2011.
- Damián, H. and Marcelo, A. (2008). *Dynamics of text generation with realistic Zipf's distribution*. (Internet). Consejo Nacional de Investigaciones Científicas y Técnicas, Centro Atómico Bariloche and Instituto Balseiro, 8400 San Carlos de Bariloche, Río Negro, Argentina. [www.arxiv:cond-mat/0212496v1](http://www.arxiv.org/cond-mat/0212496v1). July 18 2011.
- Géza, N. and Csaba, Z. (2007). *Multilingual Statistical Text Analysis, Zipf's Law and Hungarian Speech Generation*. Hungary: Department of Telecommunications & Telematics, Budapest University of Technology and Economics, pp.1-16.
- Levy M. and Sandler M. (2009). *Learning latent semantic models for music from social tags*. London E1 4NS: Centre for Digital Music, Queen Mary, University of London, MileEnd Road, .pg 6.
- Leydesdorff L. and Park, W. (2004) *KrKwic: A computer program for the analysis of Korean text*. (Internet) <https://webmail.unizar.es/pipermail/fis/2004-August/000717.html>. 29th January 2011.
- Muhirwe, J. (2007). Computational Analysis of Kinyarwanda Morphology: The Morphological Alternations. *Journal of Computing and ICT research*. Vol 1(1), pp. 85-92.
- Sajika, G. (2008). *Analysis of Sinhala Using Natural Language Processing Techniques*. Department of Computer Sciences, University of Wisconsin-Madison, 1210 W. Dayton Street, Madison, WI 53706. pp.1-6.
- Shamilov, S. and Yolacan, S. (2006). Statistical Structure of Printed Turkish, English, German, French, Russian and Spanish. In: *Proceedings of the 9th WSEAS International Conference on Applied Mathematics*, Istanbul, Turkey, May 27-29, 2006. pp638-644.
- Wentian, L. (1992). Random Texts Exhibit Zipf's-Law-Like Word Frequency Distribution. *IEEE Transactions on Information Theory*, Vol. 38(6), pp. 1842-1845.

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