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## The Information Environment of Teachers of Science Subjects in Public Secondary Schools in Offa Metropolis, Nigeria

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#### **Abstract**

Bearing in mind the strategic position of science in the development of society and arising from the need for an investigation into the information environment of Teachers of Science Subjects (TSS) in Offa, the study was carried out to determine their information needs, seeking behavior, sources, perceptions on the state of their school libraries and challenges of accessing information. It adopted survey research method with questionnaire as the tool for data collection, which was administered on all TSS in the affected schools, collected and analysed with descriptive statistics. It was discovered that the information needs of the TSS are mostly on their subject areas and contemporary methods of teaching, developments and inventions in science and technology, medical and health information, information on educational issues and furthers studies as well as on things happening around the world. The online environment -Internet shapes their information seeking behavior and was main avenue through which they access information. Their perception on the poor state of libraries in their schools is an issue of concern, as it acts as a challenge to their access to information. Recommendations were put forward on ways to remedy the situation.

**Key words:** Information environment; Teachers of science subjects; School libraries; Offa; Nigeria

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#### INTRODUCTION

The society exists with various classes and groups of individuals such as farmers, teachers, civil servants, researchers, traders, artisans, corps members, and the like. These individuals operate in different directions and dimensions based on their missions, aims and objectives, thereby contributing their various quota towards the growth and development of the society. Their contributions, however, largely depends on their access to relevant, timely, accurate and precise information, thus necessitating investigations on their information environments.

Information environment is a concept that has to do with factors surrounding availability, access to and use of information by these different categories of individuals in the society. These factors include information needs, information sources, information seeking behaviour, perceptions of information systems, and the challenges of accessing and utilizing information and its resources. According to Mooko & Aina (2007), investigations in the context of information environment includes not only the information needs, but also the information seeking behaviours, access to information and sources of information used for meeting the information needs of users, which could either be heterogeneous like rural inhabitants and artisans or homogenous like students, professionals, policy makers, researchers and lecturers. Uhegbu (2007) posits that understanding a user's information environment will help to place the information provider in a better stead to appreciate the psychology of a user in relation to his information seeking behaviour. Diagrammatically, Uhegbu sees information environment of users as follows:

A study on the information environment will investigate issues surrounding pattern of information

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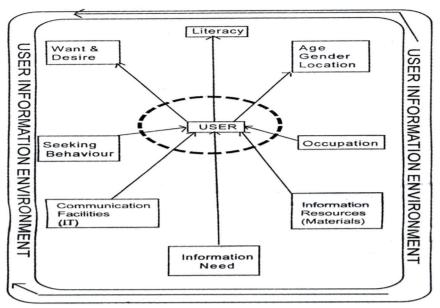


Figure 1 Information Environment of Users Source: Uhegbu, 2007.

seeking, use and perceptions of information sources in the society. Information environment of Teachers of Science Subjects (TSS) in the case of this study are limited to their information needs, sources, seeking behaviour, challenges of accessing information as well as their perceptions of school libraries, which is expected to be their major information source.

The need for information brings about information seeking behaviour in search of reliable sources for the satisfaction of the information needs. Ajiboye and Tella (2007) see information seeking behavior as the way and manner people gather and sought for information for their personal use, knowledge update and personal development. Users may be limited by the organization they work for, by the nature of their work or profession, by age sex or other social groups. An understanding of the users' nature and information seeking patterns will assist in the prescription, improvement and efficiency of information services when necessary. The information seeking behavior and pattern of using information retrieval systems depends on a number of factors. Some of the general points that affect the information environment of users are: the users' awareness and ability to access other sources of information; the users' relationship with the information unit (may be a library) concerned; the information unit's ease of accessibility; the users working conditions; the time available to the users for consulting information sources; the amount of competition that exist in the user's field of activities; the user's past experience or knowledge; how friendly, knowledgeable and efficient are the members of the information unit; and the various products and services of the information unit (Onwuchekwa, 2012).

According to Tahir & Mahmood (2008), the study of information environment as it relates to information needs and gathering behavior dates back to 1948 when Bernal and others presented a paper on scientific information at the 1948 Royal Society conference. During the past 30 years or so, a considerable body of literature has been produced dealing with information needs and information-seeking behavior of both individuals and groups in a variety of contexts (Anwar, Al-Ansari, and Abdullah, 2004). Also, many studies have been conducted to investigate the information-seeking behavior of library users based on their information environment, subject interest, occupation, and geographical location. Information needs and information-seeking behavior of academics have also been a popular area of research for the information scientists for decades (Majid & Kassim, 2000).

In Nigeria, some investigations have taken place on the information environment of various classes of individuals in the society such as lecturers and library users in various tertiary institutions (Adekunmisi, 2005; Odusanya & Amusan, 2003; Oyediran - Tidings, 2004; Nnadozie & Nnadozie, 2008; Adigun, Mohammed & Temboge, 2010); educational administrators and medical doctors (Gbadamosi, 2005); nurses (Nwagwu & Oshiname, 2009); farmers (Otolo, 2006; Ofuoku, Emah & Itedjere, 2008); artisans (Mooko & Aina, 2007); agricultural engineers (Igbeka & Atinmo, 2002); students (Ajiboye & Tella, 2007; Etubi, 2011, Ossai, 2011); law makers (Folorunso & Haruna, 2005; Ibrahim & Olorunfemi, 2008); policy makers (Nwagwu & Iheanatu, 2011); public library patrons (Issa, Abdulkareem, Isah & Kupolati, 2011), but yet to be carried out specifically on Teachers of Science Subjects (TSS) in Offa metropolis of Nigeria. According to Bitso & Fourie (2011), information environment studies on teachers in Africa are still limited. The importance of understanding users' information needs and information-seeking behaviour in order to point the way to innovations in information services led to an investigation on the information environment of teachers in public secondary schools in Offa. Understanding information environment of users as it relates to needs, seeking behaviour and sources can result in the development and provision of information services that better serve the users' information needs (Bronstein, 2010). Thus, there is a necessity and a justification for the study to fill the identified gap.

Offa is a metropolis, a town, and one of the sixteen local government councils in Kwara State of Nigeria. The metropolis is housing a Federal Polytechnic, a Naval School, a famous private international school - Adesoye College Offa as well as many primary and secondary schools. The following are list of public secondary schools in Offa, where there are TSS used for the study: Ansar-ud-deen College, Government Secondary School Ojoku, Olalomi Comprehensive High School, Iyeru-Okin Grammar School, Community Secondary School, Okin High School, Nawar-ud-deen Grammar School, Government Day Secondary School, Tawakalitu Grammar School, St. Mark Secondary School, Ansaru Islam Secondary School, Nawaru-ru-deen Secondary School, Offa Grammar School, St. Claire's Grammar School, Anglican College of Commerce and Federal Polytechnic Staff Secondary School.

Science is a branch of knowledge that needs to be inculcated in students so as to produce scientists and technology experts that will contribute meaningfully to the development of Nigerian society. It is made up of various subjects such as biology, chemistry, physics, mathematics, agricultural science, integrated science, computer studies, introductory technology and others. These subjects require the services of teachers (TSS) to impart knowledge of the various subjects in students. Meanwhile, these teachers need constant and unhindered access to information that is timely, accurate, precise and relevant in order to carry out their responsibilities effectively. It is in view of the foregoing that this study intends to answer the following questions:

- i. What are the information needs of TSS in Offa?
- ii. What are the information seeking behaviour(s) of TSS in Offa?
- iii. What are the sources of information used by TSS in Offa?
- iv. What are the purpose and reasons for their information seeking?
- v. What is the perception of TSS on the state of libraries in their schools in Offa?
- vi. What are the challenges faced by TSS in getting access to information in Offa?

#### **METHODOLOGY**

The study adopted survey research design with a structured questionnaire as the tool for data collection. The self-structured questionnaire has part A, which is on the demographic data of respondents and part B, which deals with the study objectives, with an aspects on modified four-point likert scale. No sample and sampling technique was adopted, as the exact population of the science teachers was not known. The various schools were visited on several occasions and the questionnaire administered to the affected teachers. This was done with the help of trained research assistants.

#### **DATA ANALYSIS**

On the whole, 90 copies of questionnaire were administered, properly filled, returned and used for data analysis. The table I below shows the demographic characteristics of respondents.

Table 1
Demographic Characteristics of Respondents

Demographic Characteristics of	_	
Respondents	Frequency	Percentage
Gender		
Male	42	46.7
Female	48	53.3
Total	90	100
Age Bracket		
Below 30	20	22.2
30 - 40	27	30.0
41 - 50	35	38.9
Above 50	8	8.9
Total	90	100
Highest Academic Qualification		
NCE/HND	28	31.1
B.Ed, B.Sc, B.A.	52	57.8
PGDE	6	6.7
M.Ed, M.Sc, M.A.	4	4.4
PhD	-	-
Total	90	100
<b>Subject Specialization</b>		
Biology	15	16.0
Chemistry	9	10.0
Physics	7	7.8
Mathematics	21	23.3
Agricultural Science	13	14.4
Integrated Science	14	15.6
Computer Studies/ICT	6	6.7
Introductory Technology	5	5.6
Others	17	18.9
NB:		
Some respondents indicated more than		
one subject. This may be due to the		
fact that a teacher may be given more		
than a subject to teach.		

Table 2 Information Needs of Respondents

Information Needs	Frequency	Percentage
Information on inventories and development in science and technology	54	60.0
Information on my subject of specialization and contemporary teaching methods	68	78.6
Information on education issue and further studies	49	54.4
Information on better job opportunities and business	41	45.6
Information on good medical and health issues	51	56.7
Information on politics, social and economic issues	23	25.6
Information on entertainment and sports	23	25.6
Information on religious and cultural maters	30	33.3
Information on things happening around the world	49	54.4
Information on protection of human right	42	46.7

N=90

Table 3
Behaviour and Attitudes of Respondents while Seeking Information

Information Seeking Behaviour and Attitudes	Frequency	Percentage
Looking for somebody or people to assist you in getting the information	44	48.9
Asking question from people around on where and how to get the information	44	48.9
Going to the library to search for materials that will satisfy my information needs	53	58.9
Going to the Internet to browse in order to get the information	66	73.3
Listening to radio and watching television in order to get the information	56	62.2
Discuss with colleagues and consult knowledgeable people in the subject field	46	51.1
Buying newspapers / magazines.	27	30.0

N=90

Table 4 Information Sources Used by Respondents

Information Sources	Frequency	Percentage
My school library and others libraries	46	51.1
Radio and Television stations	64	71.1
Newspaper stands to read news and magazines	35	38.9
Internet at cybercafés	74	82.2
Colleagues, friends and relations	42	46.7
Government agencies and NGO's	18	20.0
Church and Mosques	23	25.6
Lectures / Conferences, Seminars, Workshops	62	68.9

N=90

Table 5
Purpose and Reasons for Seeking Information by Respondents

Purpose and Reasons for Seeking Information	Frequency	Percentage
For preparation of class notes for teaching	62	68.9
For updating knowledge and being current	71	78.9
For carrying out research work	53	58.9
For improving reading habit and other personal ambition	50	55.6
For entertainment and leisure	24	26.7

N=90

Table 6 Perceptions of Respondents on the State of Library in their Schools

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State of School Libraries	<b>Strongly Disagree</b>	Disagree	Agree	<b>Strongly Agree</b>	Total
There is no library in my school	17 (18.9%)	11 (12.2%)	34 (37.8%)	28 (31.1%)	90 (100%)
The library in my school is not functioning	13 (14.4%)	15 (16.7%)	33 (36.7%)	29 (32.2%)	90 (100%)
No current books, magazines and other publications in my school library	13 (14.4%)	25 (27.8%)	28 (31.1%)	24 (26.7%)	90 (100%)
The management of my school is not given attention to my school library	8 (8.9%)	21 (23.3%)	33 (36.7%)	28 (31.1%)	90 (100%)
There are no computers and Internet connectivity in my school library	12 (13.3%)	19 (21.1%)	27 (30%)	32 (35.3%)	90 (100%)

To be continued

#### Continued

State of School Libraries	<b>Strongly Disagree</b>	Disagree	Agree	Strongly Agree	Total
Workers/ staff in my school library are not qualified as library practitioners	13 (14.4%0	23 (25.6%)	29 (32.2%)	25(27.8%)	90 (100%)
I do borrow books from my school library	27 (30%)	33 (36.7%)	14 (15.6%)	16 (17.8%)	90 (100%)
I do visit my school library to read books and magazines	26 (28.9%)	38 (42.2%)	12 (13.3%)	14 (15.6%)	90 (100%)
Reading desks and chairs in my school library are in bad conditions	12 (13.3%)	20 (22.2%)	30 (33.3%)	28 (31.1%)	90 (100%)
New library should be established with functional facilities and qualified staff	2 (2.2%)	7 (7.8%)	29 (32.2%)	52 (57.8%)	90 (100%)

NB: Percentage is in brackets

Table 7
Challenges Encountered by Respondents While Seeking Information

Challenges	Frequency	Percentage
Lack of information materials and resources in my school library	53	58.9
High cost of accessing information on the Internet	52	57.8
Poor computer and internet skills	42	46.7
Inadequate time for searching information	45	50.0
Cost of others information sources	41	45.6

N=90

# DISCUSSION AND IMPLICATION OF FINDINGS

The findings have shown that the information needs of Teachers of Science Subjects (TSS) are mostly on their subject areas and contemporary methods of teaching, developments and inventions in science and technology, medical and health information, information on educational issues and furthers studies as well as on things happening around the world. See Table 2. This is in line with Table 4 which shows their purpose and reasons for seeking information as to update their knowledge and remain current, preparation of class notes for teaching, carrying out research works and experiments as well as improvement of reading habits and personal ambition. These information needs and purpose of information seeking by TSS may be attributed to the demands of their professional duties as teachers. As science practitioners, they are meant to be up-to-date so as not to impart same in students.

Table 3 and Table 4 revealed the information seeking behaviour and attitudes of TSS as well as their information sources. These are mainly on the online environment – the Internet, with radio stations and television channels. The preference for the Internet concurs with the findings of Obuh (2009) that the attitudes of information users are focused online for desktop access to electronic information resources. That was why Ajala (2007) opines that information users resort at a much greater cost to Internet cybercafés to satisfy their information needs, because they are aware of what the Internet provides. Williams & Coles (2007) found that teachers rely on readily available sources in their schools. This is where the issue of availability comes in. The case of radio and television as information source may be attributed to easy availability in their respective homes. As noted by Uhegbu (2007), availability is one of the major factors that determine the information sources to be consulted for the satisfaction of information needs.

The state of libraries (where existing) in public secondary schools (PSS) in Offa is not encouraging. As shown in Table 4, the perception of TSS to the condition of libraries in their schools is nothing to cheer. This is because the school library is meant to be the major information source for the teachers to satisfy their information needs and purpose of information seeking so as to be able to impart result-oriented knowledge of science and technology in students. But the condition of those libraries is a threat to secondary education in Offa and by extension Nigeria in general. There are cases of unavailability and malfunctioning of school libraries, lack of management attention to libraries, absence of computers and Internet connectivity, un-conducive reading desks and chairs and lack of qualified librarians. These are in tandem with the findings of Adetoro (2004), Ajegbomogun & Salaam (2011) and Gbadamosi (2011). The challenges encountered by the teachers while seeking information as shown in Table 7 are related to the poor condition of their school libraries and high cost of accessing information on the Internet. However, as revealed in Table 6, 89 (90%) of the respondents advocated for the establishment of new libraries in their schools with functional facilities and qualified staff.

There is no doubt that availability and utilization of information resources by TSS will contribute significantly in our drive for development. This is premised on the fact that they are individuals entrusted with the future of the nation at hand, to lay solid educational foundation in students. These teachers have various information needs in order to properly execute the responsibilities given to them by the government, but it is unfortunate that their major source of information, the school library, can be

generally described as nowhere to be found. This will no doubt rubbish the bring back the book (BBTB) initiative (www.bringbackthebook.org) of President Goodluck Jonathan, that is geared towards reviving poor reading habit among Nigerians. How can we bring back the book, where as the home of knowledge and the major tool for developing reading culture, libraries, are in shambles in our public secondary schools across the federation? It is only when a teacher reads and acquire knowledge that he will be able to impart same in the students.

#### CONCLUSION AND RECOMMENDATION

It can be seen from the study that TSS have various information needs, exhibit information seeking attitudes and use information sources for their information needs. Meanwhile, their perception of the state of libraries in their schools is an issue of concern, due to the fact that the libraries are meant to be their major information source. The study also identified challenges affecting access to information by the teachers and noted that the bring back the book initiative by the federal government will be an effort in futility without a coordinated approach for the development of standard libraries in public secondary schools in Nigeria.

As a result of the findings, the study made the following recommendations:

- Governments at all levels should rise and live up to their responsibilities in repositioning the education sector in Nigeria. Kwara State government should establish libraries in all public secondary schools in Offa and by extension across the state. The state government can liaise and partner with Offa local government in the process, with adequate and current information resources, Internet connectivity and qualified human resources. This will enable the teachers to have unhindered access to information for the satisfaction of their information needs, and be able to inculcate excellent knowledge in the students who are leaders of tomorrow. This will also contribute to the realization of BBTB initiative of the federal government.
- Community organizations and various unions in Offa town should consider the adoption of self-help approach to the development of libraries in public secondary schools in the metropolis.
- Establishments and organizations in Offa should explore the development of school libraries as part of their corporate social responsibility.
- The National Open University of Nigeria (NOUN) should consider the establishment of a study centre in Offa so as to provide avenue for teachers in the town with information needs on education and further studies to enroll for graduate and postgraduate courses. Stakeholders, educationists and local government administration in Offa can devise strategies on how to realize this.

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