

*Full Length Research Paper*

# Information needs and behaviours in developing countries: A perspective of Ranganathan's Pmest categorization

Jonathan Ndubuisi Chimah<sup>1\*</sup> and Nwokocho Udo<sup>2</sup>

<sup>1</sup>Energy Research Centre Library, University of Nigeria.

<sup>2</sup>Department of Library and Information Science, Abia State University Uturu, Nigeria.

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The information needs of people in the developing regions are for work-related activities, leisure, consumption, and daily survival. This paper aims to provide an understanding of the information needs and behaviours of people in developing regions. The paper further presents a highlight of concept of developing countries; analogy of the framework of the Ranganathan's categorization of human knowledge (PMEST); analysis of the theory in relation to information needs and behaviours; Ranganathan and Facet Analysis. It also explores some general parameters influencing information-seeking behaviour of types or groups of individuals in developing countries. Some of the information-seeking behaviours include passive quests for information and heavy reliance on opinion leaders, rumours, and oral sources. This is due to low literacy levels and ignorance about other sources. People generally have not adopted the habit of utilizing information resources such as libraries and information centres in their work, life, and study. Descriptive survey research designed was employed using documentary research which represents secondary sources of data collection. Methodology involves critical scrutinization and examination of existing data using qualitative descriptive analysis.

**Key words:** Information needs, information behaviours, developing countries, Ranganathan, PMEST.

## INTRODUCTION

The term "information need" refers to the information that people require to conduct their business and live their daily lives. "Information behaviours" are the tendencies and approaches exhibited by people while seeking out information. All human beings need information, regardless of where they live. It is required for individual growth and development, and by extension, societal growth and change, too. Information is needed both for

personal, social and/or work-related activities of individuals and for development of societies and states.

As information-dependent organisms, human beings have discernible ways of looking for information to meet their information needs. However, for reasons to be discussed, access to information through libraries and over the Internet, while increasingly common in the developed world, is limited in developing or under-

\*Corresponding author. E-mail: [jonachim2000@yahoo.com](mailto:jonachim2000@yahoo.com)

developed countries. Rather than drawing on these sources for information, people in developing countries often use a variety of other information-seeking resources that are more readily available.

"Information need" was further explained by Naumer and Fisher (2010) as one of the most central concepts within library and information science (LIS). They asserted that if people did not have information needs, then libraries and other information systems would cease to exist, even basic interpersonal human communication would be altered. An in-depth understanding of "information needs" is critical to answering some of the larger questions facing LIS from an individual, organizational, and societal perspective. According to them, these questions include:

1. How are information needs created?
2. What motivates people to seek information?
3. Why do people sometimes avoid information?
4. How do people express information needs?
5. How is relevance considered?
6. How should information be organized and managed to best respond and anticipate people's needs?
7. How should we organize and plan for the expression of information need?

Library and Information professionals thus require an understanding of what an information comprises, how it develops, is met, and transforms in order to provide optimal service in collection development, cataloguing, and reference, etc.

### **Objective of the study**

Based on this background, the study seeks to identify and explain the way of classifying knowledge and information in (order to help users effectively and efficiently) using Ranganathan's Theory of categorization of knowledge in first instance. And secondly to ascertain how developing countries of the world perceive, value, seek information; as well as the barriers to meeting their information needs. Thirdly, it aims to educate and fully inform student researchers and other professionals in the field of information needs concepts and its associated theories.

## **LITERATURE REVIEW**

### **Ranganathan and facet analysis**

The Art and Architecture Thesaurus structure is heavily influenced by the work of the Indian Librarian, S. R. Ranganathan. Ranganathan, eminent librarian and a pioneer in modern information science, developed his faceted classification scheme in the 1930s. A faceted system recognizes that any given subject has many aspects, and tries to synthesize these aspects in a way

that best describes the subject. Some systems are pre-structured before use (such as the Library of Congress Subject Headings) and are therefore fixed, whereas faceted systems can accommodate new knowledge in more flexible ways (Cleveland and Cleveland, 1990).

Colon Classification contains both basic subjects and their facets, which contain isolates. A basic subject can stand alone, for example, "literature" in the subject "English Literature". An isolate, in contrast, is a term that mediates a basic subject, such as the term "English." To create a class number, the basic subject is named first. The isolates follow, entered according to a facet formula. This formula states that every isolate in every facet is a manifestation of one of five fundamental categories, personality, matter, energy, space, and time. Personality is the distinguishing characteristic of a subject. Matter is the physical material of which a subject may be composed. Energy is any action that occurs with respect to the subject. Space is the geographic component of the location of a subject. And time is the period associated with a subject. Thus, the basic subject "handicrafts" of the topic "19th-century woven wool Peruvian clothing handicrafts" would have the isolate from the personality facet "clothing"; from the matter facet, "wool"; from the energy facet, "woven"; from the space facet, "Peru"; and from the time facet, "19th century". Some topics have fewer than five fundamental categories. And some have more than one facet in a given fundamental category. Isolates are always arranged in order of decreasing concreteness, based on the fundamental categories. Personality is considered the most concrete and time the least concrete. The acronym PMEST helps the classifier remember the formula and its order."

### **Concept of developing countries**

Based on their economies, the World Bank (2009) has classified the countries of the world into low, middle, and high income economies. According to the Bank, 'low income and middle income economies are sometimes referred to as developing economies' or countries. Developing countries of the world are those with low standard of living, a weak industrial base, and a generally low human development index score. Among the outstanding features of developing countries are widespread poverty and low capital formation. The developing countries are found especially in sub-Saharan Africa, Asia, the Pacific, Latin America, the Caribbean, etc. The factors responsible for the under-development of these countries are many and are subsumed under social, political, and economic considerations. Among the many political and economic considerations is improper access to education and information (Wikipedia, 2007).

### **Framework of Ranganathan's theory of knowledge**

The framework for this entry is based on an adaptation of

Ranganathan's categorization of human knowledge. Ranganathan categorized human knowledge using concepts of "Personality", "Matter", "Energy", "Space" and "Time" (PMEST) (Sonnenwald and Livonen, 1999). This categorization also can be used to understand human information-seeking behaviour by drawing the following analogies:

"Personality" includes individual information seekers and individual information-seeking behaviours occurring in the information environment, both of users and managers, their social networks, etc.

"Matter" includes the information and information resources, access systems and technology.

"Energy" entails the problems/goals, processes and tasks undertaken in the course of information provision.

"Space" entails the work space, organization, country, or geographic unit.

"Time" entails episodes, intervals, and total time needed for information to be accessed (Ekoja 2010).

#### **"Personality": individuals and information seeking in the developing world**

At the most basic level, one might simply explore the ways individuals seek information, which could be through any or a combination of the following ways:

1. Experiment(s) or adopting a trial and error approach.
2. Asking colleague(s) or discussing with him/her (them).
3. Consulting personal collections for relevant information sources.
4. Observing nature or environment for needed information.
5. Consulting library/information centers for information either through self-help or consulting the librarian/information professional.

Ekoja (2010) notes that information-seeking behaviours vary considerably from one individual to another according to age, gender, level of education, occupation, location, religion, culture, etc. It is very difficult, if not impossible, to identify common information-seeking behaviours for all the peoples of the developing regions of the world. Information-seeking behaviour is the noticeable, and in some instances, the unnoticeable traits individuals exhibit or ways they adopt in the course of seeking out needed information. It is the purposive seeking for information as a consequence of a need to satisfy some goals (Wilson 2000). Information behavioural traits would be exhibited in the course of passive attention, passive search, active search, or on-going search for information. Information-seeking

behaviour is therefore both a function of recognition of one's needs for information, and knowledge of, availability of, and ability to make use of information services and resources to meet ones perceived information needs.

#### **Parameters affecting meeting information needs of individuals**

Reitz (2004) defines information need as "a gap in a person's knowledge that, when experienced at the conscious level as a question, gives rise to a search for an answer. If the need is urgent, the search may be pursued with diligence until the desire is fulfilled". There are basically four types of individuals found in developing countries: students, professionals, farmers, and artisans. For all four groups costs, quality, or availability of information resources such as libraries, information centers, and some information networks more commonly accessible in more developed countries (e.g., professional conferences) limit their information access and contribution to their use of alternative means to obtain information.

There are millions of students engaged in academic pursuits or the pursuit of professional qualifications in the developing countries. Primarily, they require or need information that will support or facilitate their programmes. They would also require information for their daily survival, such as information on where to get access to health care delivery, foods and drinks, clothing, spiritual needs, etc: Even though there are millions of such students, their social/professional networks are limited because of the constraints of economic resources and technological considerations. Students in developing countries are therefore more dependent for information than those in developed countries on school or university library resources that often much poorer in quality, breadth, depth and being up to date than those in developed countries - or on other students and professors or teachers with whom they are in direct contact (Ekoja, 2010).

#### **METHODOLOGY**

Descriptive survey research designed was employed using documentary research which represents secondary sources of data collection. Methodology involves critical scrutinization and examination of existing data using qualitative descriptive analysis which is reading meaning into what others have written on our subject matter (that is, all the relevant data gathered) and systematically, summarizing, and examining the relationship among the variables as contained in the data gathered to ensure their validity and reliability for the study.

#### **DISCUSSION OF FINDINGS**

Professionals in the developing, as in the developed

countries, include engineers, health care practitioners, legal practitioners, teachers, administrators, scientists, etc. Professionals require information to support their respective practices, and for their day-to-day living as well. Owing to economic and technological constraints, among other reasons, most of the professionals in the developing countries are unable to develop their social/professional networks to be able to acquire the needed material for research and other purposes. Due to poor institutional funding, professionals in developing countries can hardly attend international conferences either, except in the few instances that they are sponsored by international organizations. Because of these obvious limitations, professionals in developing countries have fewer social/professional networks than their counterparts in developed countries.

The farmer, artisan, and other less skilled workers also require information to further their practices and for their daily survival. It is probably with this category of information seekers that there would be the most major differences in terms of information needs and seeking behaviours when compared to their counterparts in the developed countries. This is so because of the big disparity in the levels of education of farmers, artisans, and less skilled workers in developing countries. In fact, in the developing regions, the majority of farmers, artisans, etc., are generally people with little or no education. Because of their low levels of education and general lack of exposure to a variety of information resources, they may not know how to go about meeting their information needs, or even if they know, they tend to wait passively for their information needs to be met instead of taking proactive measures to meet them. Another big drawback for farmers, artisans, and less skilled workers is the lack of information in the language or form they would be able to access.

### **“Matter”: Information and its resources in developing countries**

Information ought to be available to support the needs of the people for career-related activities, consumption, leisure, etc. both for developing and developed countries of the world. Such information is available from a number of sources. Some developing countries have acknowledged the need for and attempted to provide information resources to their populations. Most of the developing countries are both information-poor and information-starved. They are information-poor because they do not experience the kind of information flood experienced by the developed world. They are information-starved because they do not have the means to acquire the materials and infrastructure that contain needed information, or the economic resources needed to pay personnel to acquire, organize, and maintain access to the information. Developing countries, therefore, in most

instances have to wait for donations, which are often outdated or non-relevant information resources.

In developing countries, much like the developed world, current information for ready application is required. The information resources available to the populations of the developing world include print but also non-print materials, including databases (both online and offline). Electronic databases are available for use in the few libraries and information centres that have been automated and/or digitized. Where they exist, libraries and information centres are located mainly in urban and semi-urban areas, with the implication that rural dwellers often do not have access to the resources to meet their information needs.

Information access systems in the developing countries are not well developed and coordinated because of the lack of the wherewithal of individual libraries to develop them, which is made worse by their failure to enter into cooperation and collaboration. Worsening the situation is the fact that the necessary information and communication technologies (ICTs) and infrastructure required for information handling are not available. Also most information professionals lack the necessary and requisite ICT skills. Inadequate training and human resource capacity is identified as a problem. This lack of capacity is not limited to ICT use, but there is a general lack of human resource capacity to manage even conventional information resources and services so that they can meet the information needs of the communities they are meant for.

### **“Personality” and “Matter”: The interplay of information resource availability and the use of alternative information-seeking behaviours**

In most developing countries, professionals like engineers, scientists, technologists, medical doctors, pharmacists, etc., are unable to have most of their professional work information needs met because of the many inhibiting factors earlier stated. A study conducted on the information needs of scientists and technologists in Nigeria by Adimorah (1993) revealed that libraries and information centres were unable to meet their information needs due to poor stocking and staffing. Current journals and databases lack good retrieval systems and inter-library loan facilities. The other shortcomings included inadequate information sources and the poor orientation of library and information centre staff to responsive reference services.

Two-step information-seeking approach is a situation in which a person obtains information from friends and acquaintances who, in an earlier first step, had obtained such information from some other source. This approach still thrives in developing countries because the Internet is not readily available, especially to rural dwellers. The gregarious nature of the populations in developing

countries, especially in Africa and Asia is another catalyst for the two-step flow of information seeking. This also promotes the use of oral sources by information seekers, including reliance on opinion leaders for information. This was acknowledged in a study of Indonesian farmers, who, it was reported, relied on opinion leaders and those with higher socio-economic status to get information about pest management (Feder and Savastano, 2006).

The same is also true of many other settings in developing countries where community members get information from chiefs, community leaders, pastors, imams, and others with higher socio-economic status. Related to the issue of two-step information seeking is that of rumour, which is propensity of African governments and their agencies to suppress information. Another big barrier to the use of libraries or information centres by many people in developing countries is that in making information and information resources available, consideration is not given to local languages, visual orientation, and the use of voice interfaces for populations that are to a very big extent illiterate. These are some of the problems facing information diffusion and use in many developing countries. A typical case is with regard to the developing regions of China of which it was reported that most citizens had not adopted the habit of utilizing information resources in their work, life, and study because of their low literacy levels (Yanru, 2006).

The library in most developing countries is the least patronized when users seek to meet their information needs because of irrelevant materials in terms of their language(s), form(s), and up-to-dateness. There is also problem of lack of local content that meets the local and immediate information needs of the members of the communities where libraries and information centres are located. Most cases, libraries and information centres are not providing services that users require. Another major barrier to information needs and seeking behaviors of populations in the developing regions of the world is that information seekers more often than not use information other than that which they expressed a need for.

### **“Energy”, “Space”, and “Time”: Barriers in obtaining information to meet information needs and impacts on information-seeking behaviours**

There are a number of barriers to obtaining information that meets information needs and seeking behaviours in developing countries. These include outright non-availability of information and the information resources that meet the needs of users; availability of inappropriate information, and information resources; non-awareness of the information and its sources that are available; lack of time for searching for information and for learning how to use an information source; lack of the hardware and/or software with which to retrieve information; distance from users' home to points of information, etc.

These problems have been observed by Case et al. (2004) to be setbacks to the free flow of information right from the source through the media to users, and have economic, social, environmental, and infrastructural dimensions. The economic problems of information seeking relate to cost as it affects information carrying media, time, and labor. The general poverty of the developing regions makes it near impossible to develop the information infrastructure that can make information available to meet the needs of the people.

Compared to the developed countries, the information seeker in developing countries spends more time and exerts more effort in accessing the required information, which, in some instances, even after rigorous searching, is still not available. This is so because in the first place information facilities, as well as retrieval devices to aid his searching, are often just not available. The scarcity of retrieval devices makes browsing the most favoured way to seek for information. Again because of the failure of municipal services provision, the information seeker spends 2-3 times over and above the time and effort he would have required to access information in better-supplied areas. An example is that in trying to access information on the Internet, power outage may be experienced, which will lead to the suspension of the exercise.

### **Conclusion**

Information is of strategic importance to the people of the developing regions of the world. It is very difficult to identify common information needs and behaviours for all the people of this region. However, the problems they face in the course of accessing information to meet their needs have much in common. The issue of information needs and behaviours in developing countries was addressed from the perspective of an adaptation of Ranganathan's PMEST categorization, which stands for personality, matter, energy, space, and time. The information seekers in the developing regions include students, professionals, artisans, farmers, etc., whose limited social/professional networks constitute one of the problems for their failure to have their information needs met. Some of the potential information users have very little education, or are even outright illiterate and ignorant, and therefore do not know how to go about meeting their information needs, or at best wait passively for information to be brought to them.

The two-step flow of information is the vogue due to vast oral sources, which along with the suppression of information by authorities, is also associated with reliance on rumours, opinion of leaders, and community leaders. The majority of the developing countries experience information starvation and poverty and lack of commitment by concerned authorities to provide effective information systems. The information access systems are generally

not well developed, and part of this is explained by the fact that most information professionals lack the requisite skills, both conventional and ICT, for the handling of information.

The barriers to obtaining information to meet the needs of the people of the developing regions are many. They include outright non-availability of information and the information resources that meet the needs of users; availability of inappropriate information and information resources, non-awareness of the information and the information resources that are available; lack of time for searching for information and for learning how to use information sources; lack of the hardware and/or software with which to retrieve information; distance from users' homes to points of information; and other factors associated with the problems of daily life in developing countries. Despite the much challenges, information needs will be met if governments and other funding authorities will rise up to make education and information provision priorities.

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