INFORMATION LITERACY SKILLS: A STRATEGIC IMPERATIVE FOR LIBRARIANS IN THE DIGITAL AGE

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ABSTRACT

The Digital Age has come with a lot of changes in the ways and manner information is handled and for librarians to perform their duties effectively, efficiently and competently, they must respond positively to the changes brought about by the new trend in information handling. The paper aims at discussing the information literacy skills needed by librarians in performing their professional duties in the new era called the "Digital Age". The paper also looked at the various eras, which civilization has passed through before the Digital Age; concept of information literacy; the need and importance of information literacy to librarians and the approaches to information literacy. It highlights the information literacy skills needed by librarians namely skills on need for information; understanding availability skills; skills on information location; skills on result evaluation; skills on result exploitation; skills on ethics and responsibility of use of information; skills on sharing or communicating information and skills on managing findings. The paper concludes by highlighting the urgency and strategic imperativeness of librarians in acquiring information literacy skills, if they must be remain central to information provision in the Digital Age.

Keywords: *Information, Information literacy, Skills, Librarians, Digital age*

Introduction

Civilization is now considered to be undergoing its third era, having passed through two earlier ones. The first of such era was the Agrarian Era, characterized by its dependence on land as its main source of power and capital. The second was the industrial Era, when machine formed the nucleus of economic resource, while the third era is the new wave, called the Information Age (Kalu & Unagha, 2013). The Information Age, also known as the Computer Age or New Media Age or Digital Age is a period in human history characterized by the shift from traditional industry, which the industrial revolution brought through industrialization to an economy based on information computerization. The onset of the Information Age is associated with the digital revolution, just as the

Industrial Revolution marked the onset of the Industrial Age (Wikipedia, the free Encyclopedia, 2015).

In the Information Age, the phenomenon is that the digital or information industry creates a knowledge-based society surrounded by a high-tech economy that spans over its influence on how the manufacturing and the service sector operate in an efficient and convenient manner. The Information Age has brought a change that capitalizes on the computer microminiaturization advances, with a transition spanning from the advent of the personal computer in the 1970s to the Internet; reaching a critical mass in the early 1990s and the adoption of such technology by the public. The evolution of technology in daily life, as well as of educational lifestyle, the Information Age has brought about rapid global change in communication and networking. While Imo and Igbo (2011) noted that a great change has occurred in the information environment, Adeeko (2013) observes that no other change has offered greater challenges than the emergence of the Information Age. These changes advertently or inadvertently affect librarians in the changed environment.

A librarian is a professionally trained person responsible for the care of a library and its contents, including the selection, processing and organization of materials and the delivery of information (Reitz, 2004). Librarians often called information professionals increasingly combine traditional duties with tasks involving quickly changing technologies. New technologies have created a new service environment that has pushed conventional boundaries much farther, with calculated risks and opportunities. In this new environment, librarians that can survive are those that can react proactively to a broad spectrum of contemporary challenges that focuses on speed, cost and quality (Ahmad & Yessen, 2009). The new era and its attendant transformation require librarians to acquire the necessary skills and competency to understand and appreciate these changes, so that they can harness and exploit the new technologies efficiently, ethically and responsibly (Nwosu & Agu, 2011).

Inasmuch as many librarians have become computer-literate, but not many librarians are information literate. This means that being able to use computers alone is not enough to tag one as information literate. Librarians must be able to apply computer skills to real situations and needs. Librarians must be able to identify information problems and be able to locate, use, synthesize and evaluate information in relation to those problems. The point being made here is that today, the challenges posed by the developments in the Information Age has increased the demands on the librarian. These changes in the handling of information makes it strategically imperative that librarians, who are information gateways, must possess a level of skills and competency in information literacy, if they must remain central to information provision in the Digital Era.

Information Literacy: A Conceptual Overview

The phrase information literacy (IL) first appeared in print in a 1974 report by Paul G. Zurkowski, written on behalf of the National Commission on Libraries and Information Science (NCLIS0). Zurkowski used the phrase to describe the "techniques and skills" known by the information literate for utilizing the wide range of information tools as well as primary sources in molding information solutions to their problems (Adeeko, 2013). From then on, the phrase has been given new but related meanings and has been variously defined. The United States National Forum on Information Literacy (1989) defines information literacy as "the ability to know when there is a need for information, to be able to locate, evaluate and effectively use that information for the issue or problem at hand". Eisenberg (2008) defines information literacy (IL) as the set of skills and knowledge that allows us to find, evaluate and use information we need, as well as to filter out the information we don't need. IL skills are the necessary tools that help us successfully navigate the present and future landscape of information.

The Association of College and Research Librarians (ACRL) of the American Library Association defines IL as a set of abilities requiring individuals to recognize when information is needed and have the ability to locate, evaluate and use efficiently the needed information (ACRL, 2000). The Chartered Institute of Library and Information Practitioners (CILIP), UK, opines that information literacy involves knowing when and why information is needed, when to find it and how to evaluate, use and communicate it in an ethical manner (CILIP, 2004). According to CILIP, an information literate person is one who can understand the need for information, the resources available, how to find information, the need to evaluate or share ones findings and how to manage the findings. The Australian and New Zealand Information Literacy Institute (ANZIL) argues that IL is a prerequisite for participatory citizenship for social inclusion, for the creation of new knowledge, for personal, vocational, corporate and organizational empowerment, as well as for learning for life (Bundy, 2004 in Arua, Uzuegbu & Ugah, 2014).

The Society of College, National and University Libraries (SCONUL), UK states that IL is a set of seven skills: identifying, scoping, planning, gathering, evaluating, managing and presenting of information (Bent & Stubbing, 2011). Igwe, Uzuegbu, Okite and Ndubuisi-Okoh (2014) in their assessment of the various definitions of IL, observe that these definitions above, have in present times informed the formulation of IL programmes in all information environments and its teaching and learning across the universe. In sum, information literacy also referred to as information competency is the ability to access, evaluate, organize and use information from a variety of sources. It is a skill that cuts across computer literacy, library literacy, media literacy, network literacy, digital literacy and visual literacy (Arua, Uzuegu & Ugah, 2014). To be an information literate person, one should be able to identify, access, locate, use and communicate information via computer systems, traditional libraries, networked structures, Internet environment and graphic media. According to Shapiro and Hughes (1996) in Wikipedia (2014), the first step in the information literacy strategy is to clarify and understand the requirements of the problem or task for which information is sought.

The Need for Information Literacy Skills
.   In recognizing the need for information literacy in national development, the United States Presidential Committee on IL released a report on January 10, 1989, outlining the importance of IL and the opportunities to develop it. The recommendations of the Presidential Committee led to the creation later that year of the National Forum on Information Literacy, as coalition of more than 90 national and international organizations. IL rose to national consciousness in the US with President Barack Obama's proclamation designating October 2009 as National Information Literacy awareness month. Obama's proclamation stated that:

> _Rather than merely possessing, we must also learn the skills necessary to acquire, collate and evaluate information for any situation. Though we may know how to find information we need, we must also know how to evaluate it. Over the past decade, we have seen a crisis of authenticity emerges. We now live in a world where anyone can publish an opinion or perspective within the information market place. At the same time, Americans have unprecedented sources of information, as well as institutions such as libraries and universities, that can help separate truth from fiction and signal from noise (Wikipedia, 2014)._

Chimah (2014) opines that IL empowers individuals and librarians and makes them become self reliant. In an era where new technologies and sources of information proliferate at break neck speed, being competent in IL is not a luxury or a casual past time but an essential requirement for survival in a changing world. According to ACRL (2014), information literacy is becoming

increasingly important in the contemporary environment of rapid technological change and proliferating information sources. Because of the escalating complexity of this environment, individuals are faced with diverse abundant information choices in their academic studies, in the work places and personal lives. It enables individual learners and librarians to master content and extend their investigations, become more self- directed and assume greater control over their own learning. An information literate person is able to:

    i.   determine the extent of information needed;
    ii.   access the needed information effectively and efficiently;
    iii.   evaluate information and its sources critically;
    iv.   incorporate selected information into one's knowledge base;
    v.   use information effectively to accomplish a specific purpose; and
    vi.   understand the economic, legal and social issues surrounding the use of information, and access and use information ethically and legally.

On this basis, information literacy forms the basis for lifelong learning. As it were, IL is common to all disciplines, to all learning environments and to all levels of education (ACRL, 2014).

Approaches to Information Literacy

There are various approaches or specific aspects of information literacy skills. Some misconstrue information technology skills alone as information literacy. It is related to information technology skills, but has broader implication for the educational system and for the society. Information technology skills enable an individual to use computers, software applications, databases and their technologies to achieve a wide variety of academic work-related and personal goals. Information literate individuals necessarily develop some technology skills. Information literacy, while showing significant overlap with information technology skills, is a distinct and broader area of competence. Increasingly, information technology skills are interwoven with and support information literacy.

To highlight specific aspects or types of information literacy skills, Shapiro and Hughes (1996) in Wikipedia (2014) advocate for a more holistic approach to information literacy education, one that encourages not merely the addition of information technology courses as an adjunct to existing curricular but rather a radically new conceptualization of the entire educational curriculum in terms of information. They suggested seven important components of a holistic approach to information literacy namely;

    i.   **Tool Literacy**: This is the ability to understand and use the practical and conceptual tools of current information technology relevant to education and the areas of work professional life that the individual expects to inhabit.

    ii.   **Library/Resource Literacy:** This is the ability to understand and use the various forma, format, location and access methods of information resources in the library, especially daily expanding networked information resources.

    iii.   **Social Structuring Literacy:** This involves understanding how information is socially situated and produced.

    iv.   **Research Literacy**: This is the ability to understand and use the IT-based tools relevant to the work of today's researcher and scholar.

    v.   **Publishing Literacy:** Ability to format and publish research and ideas electronically in textual and multimedia forms… to introduce them into the electronic public realm and the electronic community of scholars.

vi. **Emerging Technology Literacy:** The ability to continuously adapt to, understand, evaluate and make use of the continually emerging innovations in the information technology so as not to be a prisoner of prior tools and resources and to make intelligent decisions about the adoption of new ones.

vii. **Critical Literacy:** It involves the ability to evaluate critically the intellectual, human and social strengths and weaknesses, potentials and limits, benefits and costs of information technologies.

Information Literacy Skills Needed by Librarians

Acquisition of information literacy skills could be a panacea to effective use of information and effective use of information is a necessary requirement for librarians' optimum performance in their job (Imo & Igbo, 2011). Gaining skills in IL multiplies opportunities for librarians' self-directed learning as they become engaged in using a wide variety of information sources to expand their knowledge, ask informed questions and sharpen their critical thinking for further self-directed learning. To take fullest advantage of problem based learning, librarians must often use thinking skills requiring them to become skilled users of information sources in many locations ad formats, thereby increasing their responsibility for their own learning (ACRL, 2014). In the view of Arua, Uzuegbu & Ugah (2014), information literate librarians should be able to know: the characteristics of information; sources of information; information access tools; information search strategies; knowledge of critical thinking; ethical issues in using information sources; legal issues in the use of information and knowledge sharing or communication of information.

Skills required by librarians to be information literate as identified by CILIP (2012) include:

i. *Skills on Need for Information*: Recognizing that information is needed, understanding why information is needed; what information is required, as well as any associated constraints (e.g. time, currency, access);recognizing that information is available in wide range of formats in various geographical and virtual locations. The ability to articulate a question and so develop a focus for research is an important skill that librarians need to become information literate.

ii. *Skills on Availability and Identification*: Librarians should possess the skills to be able to identify what resources are available for exploitation, where they are, how to access them, the merits of individual resource types and where it is appropriate to use them. This requires an understanding of types of resources (paper-based, electronic/digital, human etc) and when to use each. What are the needs of individual resource types; what are the differences between them. For example, a journal article may be available in print, as part of an e-journal or as a record in a database of full text articles.

iii. *Skills on How to Locate Information*: An ability to search appropriate resources effectively and identify relevant information. Strategies need to be tailored to the resource being used, so as to get the best results from that resource. Users need to respond to search results possibly because there are too many and know when to stop searching. An information literate librarian would also understand that in addition to purposive searching, information can be acquired by browsing, scanning and monitoring information sources. E.g. searching across several sources, using back of book indexes, using abstracting and indexing journals, participating in e-mail discussion lists, bulletin boards, using hypertext, URLS, bookmarks, understanding and using Boolean logic etc.

iv. *Skills on Information Evaluation*: This is another skill needed by librarians to be information literate. Librarians should be able to evaluate the means by which the results were obtained in order to ensure that your approach did not produce misleading or incomplete results. This is

not just whether the resources appear to answer the question but whether it is intrinsically trustworthy. E.g. use of prior knowledge of author, editor, series, publisher to examine relevance to problem, appropriateness of style for users, currency/timeliness, consistency etc.

v. *Skills on Exploitation of Information Resources*: This involves analyzing and working with the information to provide accurate, presentable research results, or to develop new knowledge and understanding so as to understand, compare, combine, annotate and apply the information found. Recognize and understand a possible need for further information searching. Example is the use of appropriate software (spreadsheet, database, statistical, reference management etc.

vi. *Skills on Ethics and Responsibility of Use*: This skill involves understanding why information should be used in a responsible, culturally sensitive and ethical manner. Respect confidentiality and always give credit to other people's work. Understanding the nature and uses of bias, in order to report appropriately. Where appropriate, balance (unbiased) report should be provided. This could include issues of intellectual property, data protection, codes of practice and ethical principles as set out by your employers, institution or professional body.

vii. *Sharing and Communicating Findings*: This IL skill involves the ability to communicate, information in a manner or format that is appropriate to the intended audience and situation. This skill goes beyond analysis, to the synthesis, organization and creation of further information in an appropriate form. For example, the understanding of the advantages and disadvantages of different communications channels (e.g. web page, presentation, written report), participating effectively in collaborative writing and publication, including use of collaborative software (e.g. student group report, internal knowledge base, collaborative blog, Wikipedia), understanding appropriate writing styles e.g. reports, essays, presentations; knowledge of referencing or citation styles etc.

viii. *Managing of Findings*: This skill involves understanding how to store and manage the information acquired using the most effective methods available. It also involves reflecting critically on the process and achievement as well as on the sources found in order to learn from the experience of finding and using information. For example, use of folders to organize computer-stored data, organization of e-mail and e-mail attachments, tracking changes in documents, security and backup copies and personal content management.

Conclusion and Recommendations

The Digital Age is a reality, it has come with a lot of changes in the way and manner information is handled as a result of new technologies employed in information generation, organization, retrieval and dissemination. It has also brought changes in the expectation of information seekers and their demand for information. Librarians therefore, are faced with the ever increasing challenge of making information and information resources available to patrons with the same speed. This means that librarians have the challenge of acquiring new information literacy skills to enable them respond positively to the demands of the Digital Age. This is the only way librarians will continue to be relevant in their profession and become round pegs in round holes. Based on the issues raised the following recommendations were made:

1. Libraries should strategically expand their resources base to include contemporary IL tools such as ICT tools and web resources.

2. Libraries and librarians should take appropriate steps to gain competency in IL skills. It is only at this point that they would be able to guide library users on necessary IL skills.

3. Library management and heads of libraries should put appropriate machineries in place to organize staff training with focus on IL skills such as contemporary search strategies, information evaluation and legal issues in the use of information.

4. Library schools should respond positively to IL needs by designing and introducing courses that are IL focused so as to turn out librarians with adequate knowledge of IL skills.

5. Given the overall importance of IL in the Information Age, partnership and collaboration among all types of libraries should be explored in order to create sequenced and coordinated IL efforts across environments. This may include inter-institutional partnership. For example, between schools and academic libraries, public libraries reaching out to other public libraries, the traditional partnership between faculty members and librarians with necessary administrative and management support.

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