Information Technology and Community Engagement for Sustainable Development: the Role of Librarians

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Abstract

The concept of sustainable development involves such development that meets the needs of the present without compromising the need of future generations to meet their own needs. Increased access to information and communications technology provide universal and affordable access to the required information in least developed countries, there by contributing to their sustainable development. Libraries of today are meant to ensure public access to information and protect fundamental freedoms, in accordance with national legislation and international agreements. According to IFLA (2014), increased access to information and knowledge, underpinned by universal literacy, is an essential pillar of sustainable development. Hence, there is a need to explain some possible contributions the librarians make in attracting their users for sustainable development. The purpose of this paper is to examine the librarians' application of Information Technology in engaging user community for sustainable development. Several strategies of Information Technology application to win over or attract the attention of library user community for their sustainable development were discussed. This is to strengthen the ability of the library and information sector to advocate for equitable access to information and resilient, sustainable library user communities. The paper concludes that engaging library users through information technologies represents collaborative initiatives that help build sustainable communities.

Background to the Study

The application of computers and other technologies to the acquisition, organization, storage, retrieval and dissemination of information (ALA, 1983). Information Technology has revolutionized information storage and communication media resulting in the emergence of devices like television, video cassette, recorder, satellite communication, videotext, fax machine and word processors besides improving the functioning of old technologies such as radio broadcasting, printing press, telephones etc. Many of such devices are already playing important roles in engaging community members towards their required information for sustainable development. This is because, most of the information and communication technologies emerged to facilitate the creation, transforming, exchanging, preserving, storing and sharing of information. Information promotes Development. There is need for effective provision of information to human beings who want to live effectively in this world. There is a great relationship between information and Sustainable Development. Information promotes even international relations such as economic, international politics, international policies etc.

Librarians as information professionals are facing several challenges while enlarging their roles to accelerate the usability of their libraries among community Information Technology members, through information and communication technologies. Library services such as selective dissemination of information (SDI) are crucial to the library profession (Iheaturu and Okorafor, 2005). Many public and community libraries around the world are the major places where people can get reliable access to light and electricity to read, study and apply for a job. But the availability of computerized information retrieval facilitates these practices. It is therefore, necessary to highlight some roles expected of the librarians to employ in engaging their community of users through the use of information technologies in the computer era. This is because, the most successful man on earth is the one who has the best information and utilizes it.

The term 'Engagement according to Chambers dictionary (2000), means to win over or attract. Thus, community engagement in the context of this paper means to win over or attract the attention of library user community by librarians. The engagement of user community by librarians is usually achieved through various means of communication. Essentially, communication employs many means, at many levels, for many reasons, with many people, and in many ways (Sandhu, 1993).

Libraries of today are meant to ensure public Access to information and protect fundamental freedoms, in accordance with national legislation and international agreements. *According to IFLA (2014), increased access to information and knowledge, underpinned by universal literacy, is an essential pillar of sustainable development.* IFLA and the American Library Association passed a resolution on the importance of sustainable libraries in June 2015 (http://www.ala.org). The resolution of IFLA (2015) added that Libraries are sustainable channels of development, because they circulate materials, shares resources in the community and ensures everyone has access to information. Libraries collaborate internationally on inter-library lending to ensure that all countries have equitable access to information. IFLA also advocates ensuring that libraries have adequate guarantees to provide these essential services.

Objective of the Study
The purpose of this paper is to examine the librarians' application of Information Technology in engaging user community for sustainable development.

The Need for Sustainable Development
The word Development according to Encarta dictionary (2009) means the process of changing and becoming larger, stronger, or more impressive, successful, or advanced, or of causing somebody or something to change in this way. Advanced learner's dictionary also described development as the Gradual growth of something so that it becomes more advance, stronger etc. Development also entails the engendering of those conditions that generate economic growth, raise personal and group income and lift people out of poverty line. Thus, Development is to make poor people less poor by raising their economic status. Generally, development in the view of many analyst transcends the preoccupation with growth in per capita income   to more and perhaps, realistic concern with issues that relate to "quality measures" including concern over the state of health care services, educational attainment levels, i.e. reduction in illiteracy and generation of employment opportunities. Sustainable means, which can continue or be continued for a long time. It also encompasses the ability to be maintained.

However, it is safe to state that there is not a single, commonly accepted concept of sustainable development. But two major views on the subject are; the ecologists' view that associates sustainability with the preservation of the status and function of ecological systems and economists view that consider that sustainability is about the maintenance and improvement of human living standards. The most often used definition of sustainable development is that proposed by the Brundtland Commission. The World Commission on Environment and Development (Bruntland Commission) defined sustainable development as "development that meets the needs of the present without compromising the need of future generations to meet their own needs" (United Nations General Assembly, 1987, p. 43). That is "Development that meets the needs of the presents without compromising future generations". This broad definition will be considered in this paper.

The overall goal of sustainable development is the long-term stability of the economy and environment; this is only achievable through the integration and acknowledgement of economic, environmental, and social concerns throughout the decision making process. According to Emas (2015), this concept of sustainable development aims to maintain economic advancement and progress while protecting the long-term value of the environment that provides a framework for the integration of policies and development strategies. In practice, sustainable development requires the integration of economic, environmental, and social objectives across sectors, territories, and generations. Therefore, sustainable development requires that the environmental, social, and economic concerns must be integrated throughout decision making processes in order to move towards development that is truly sustainable.

Achieving Sustainable Development entails the ability of societies to maintain the process of changing and becoming larger, stronger, more impressive, successful or advanced development. Its goals are integrated and indivisible and balance between economic, social

and environmental concerns of societies. Information on how to eradicate poverty in all its forms and dimensions, including extreme poverty, is the greatest global challenge and an indispensable requirement for sustainable development. And to assess sustainability on the basis of our definitions, we need information on stocks and flows *(Sustainable Development: Definitions, Measures and Determinants)*.

According to Anyira, Onriode and Nwabueze (n.d), Libraries have a key role in preservation of indigenous knowledge – which includes information regarding fundamental aspects of life including hunting, fishing, land use, water management. This is in order to take urgent and significant action to reduce the degradation of natural habitats, halt the loss of biodiversity and help with information on how to protect and prevent the extinction of threatened species. Sustainable Development also aims to improve education, through enhancing institutional capacity. Hence, all libraries play a significant role in providing equitable access to knowledge that supports members of the community on how to think globally to improve better local situations.

United Nation's Sustainable Development Goals (Year 2030 Projection)
The year 2030 is a target for attaining Sustainable Development. The united nations have envisaged actions targets which fall into immediate (short term) targets achievable by 2020 and distant (long-term) targets achievable by 2030. These include;

1. By 2030, ensure that all men and women, in particular the poor and the vulnerable, have equal rights to economic resources, as well as access to basic services, ownership and control over land and other forms of property, inheritance, natural resources, appropriate new technology and financial services, including microfinance.

2. By 2030, ensure universal access to sexual and reproductive health-care services, including for family planning, information and education, and the integration of reproductive health into national strategies and programmes.

3. By 2030, substantially increase the number of youth and adults who have relevant skills, including technical and vocational skills, for employment, decent jobs and entrepreneurship.

4. By 2030, ensure that all youth and a substantial proportion of adults, both men and women, achieve literacy and numeracy.

5. By 2030, ensure universal access to affordable, reliable and modern energy services

6. By 2030, achieve full and productive employment and decent work for all women and men, including for young people and persons with disabilities, and equal pay for work of equal value

7. By 2020, conserve at least 10 per cent of coastal and marine areas, consistent with national and international law and based on the best available scientific information.

8. By 2030, provide universal access to safe, inclusive and accessible, green and public spaces, in particular for women and children, older persons and persons with disabilities.

9. By 2030, ensure that people everywhere have the relevant information and awareness for sustainable development and lifestyles in harmony with nature.

10. Take urgent and significant action to reduce the degradation of natural habitats, halt the loss of biodiversity and, by 2020, protect and prevent the extinction of threatened species.

11. Significantly increase access to information and communications technology and strive to provide universal and affordable access to the Internet in least developed countries by 2020

12. Strengthen efforts to protect and safeguard the world's cultural and natural heritage.

13. Facilitate orderly, safe, regular and responsible migration and mobility of people, including through the implementation of planned and well-managed migration policies.

14. Enhance scientific research, upgrade the technological capabilities of industrial sectors in all countries, in particular developing countries, including, by 2030, encouraging innovation and substantially increasing the number of research and development workers per 1 million people and public and private research and development spending.

15. Ensure public access to information and protect fundamental freedoms, in accordance with national legislation and international agreements.

16. Sustainable Development goal (goal NO.16) advocates Promotion of peaceful and inclusive societies for sustainable development, to provide access to justice for all and build effective, accountable and inclusive institutions at all levels

17. Adopt measures to ensure the proper functioning of food commodity markets and their derivatives and facilitate timely access to market information, including on food reserves, in order to help limit extreme food price volatility

18. Enhance the use of enabling technology, in particular information and communications technology.

Libraries Contribution towards Sustainable Development
Libraries are sustainable facilities, that circulate and share information resources in the community and ensures everyone has access to information. Libraries collaborate internationally on inter-library lending to ensure that all countries have access to information (IFLA, 2012).

Efforts on the contribution of libraries to Sustainable development have been carried out in various spheres of life and in different countries of the world. For instance, Infomed is the first electronic health information network in Cuba, which emerged as part of a project to facilitate the electronic exchange of information between a set of libraries, information centres and other entities that make up the National Information System of Medical Sciences in the Ministry of Health (*Advancing Sustainable Development*).

Similarly, The United States National Broadband Plan recognizes the role of libraries and other community organizations in providing training and access to high-speed Internet (Becker, et l.; 2012). Libraries are already included in National Development Plan, and Engagement by other Public authorities in signing the Charter of Access to Information, a project supported by World Bank in Madagascar in 2013-2014).

The Freedom to Read Foundation (FTRF), a non-profit legal and educational organization affiliated with the American Library Association, protects and defends the First Amendment to the Constitution and supports the right of libraries to collect - and enhance individuals to access – information (http://www.ftrf.org/?page=About*).* This is in order to ensure public access to information and protect fundamental freedoms, in accordance with national legislation and international agreements, Also in Ukraine, protests in Kiev in 2014 around the Maidan put the National Parliamentary Library of Ukraine was at the midst of the clashes. The library opened its doors to those wounded during the clashes and people in need of some rest and a safe place were catered for (http://www.ifla.org/node/8422). In Moldova, libraries are contributing to Open Government Partnership (OGP) action plans, a platform between government, civil society and business to drive commitments to open government and accountability. Librarians attend civil society meetings to help develop the country's national action plan, and this portrays the role of libraries as a supporter of access to information.

In addition, IREX (2013) brought that In Romania, librarians trained by Biblionet helped 100,000 farmers get US$187 million in subsidies via new Internet and computer services in 2011-2012. The 1,000+ librarians who participated in training decided to bring the services to their libraries together with local mayors. Most of the mayors understood that this service is in the farmers' interest. The programme helped farmers learn how to use the technology in libraries to access financial forms and submit them to the government, saving time and money.

Literacy skills also support health literacy and the capacity to access and use health information. As brought by Arts Council England (2014) 81% of local government library authorities in England provide access to e-information on health and wellbeing. In Netherlands Boekstart (book start) works with day care and healthcare centres, public libraries and primary school to provide books and literacy training to 75,000 children per year. The programme is supported by national and local government, and aims for long-term collaboration between organisations that support children's literacy (www.boekstart.nl).

Public access to ICT and skills enables people to apply for jobs, as the application process for all jobs has moved online. in the European Union for instance, 250,000 people find jobs through their public library each year (*Public Libraries 2020,* 2014).

The Media and Information Literacy (MIL) Recommendations of IFLA outlines the knowledge, attitudes, skills, and practices required to access, use, and communicate information in ways that respect human rights. In response to these, Libraries make Internet access available to the community at no or low cost. In many countries, public and educational libraries are the major or only providers of such access.

In terms of strengthening efforts to protect and safeguard the world's cultural and natural heritage, libraries have been at the forefront of evacuating and preserving the unique heritage of Mali. Armed groups in 2013 occupied Northern Mali and Timbuktu, a city famous for its cultural heritage and its vast amount of public and private libraries with invaluable documentary heritage. To safeguard the manuscripts during the occupation, volunteers smuggled them into safety to Bamako with the help of international support. The manuscripts have since been kept in the capital and are undergoing restoration and digitization work (www.unesco.org).

In April and May 2015, After the Nepal earthquakes, libraries have been quick to react and safeguard their unique cultural heritage collections as well as their other holdings. Temporary tents were erected to guarantee access to materials for patrons. Unique and fragile material was moved to safe storage places. Libraries are now seeking support for emergency preservation of damaged collections and digitization for wider use (Bradly,2012).

According to Bill & Melinda Gates Foundation (2014), the e-Library Nenasala Programme in Sri Lanka,is a government-run initiative to increase digital literacy and access to technology among the nation's poorest residents living in remote rural areas. The Nenasalas offer instruction in basic computer skills, guidance on accessing information through the Internet, and a wide variety of locally relevant knowledge.

With regards to Support and strengthening the participation of local communities in improving water and sanitation management, San Juan Planes Community Library (Honduras) plays a central role in bringing safe drinking water to the entire community via a water treatment project they established in the town's central square(Beyond Access MDGs report, 2013).

In Africa, the National Library of Uganda has an ICT training program designed for female farmers, providing access to weather forecasts, crop prices, and support to set up online markets, in local languages. This programme increases the economic well-being of the library users (farmers) through technology skills (Beyond Access, 2012). Botswana Library Association developed a strategy to identify where libraries contribute to Botswana Vision 2016... they collect, organise and disseminate information that society access and uses to inform themselves on various issues of life. However, attainment of the Vision extends beyond just informing and educating, it cuts across all the pillars by empowering communities through knowledge and the ability to access information for themselves (Radijeng, 2013).

The MDGs predicted that, by 2020, will conserve at least 10 per cent of coastal and marine areas, consistent with national and international law and based on the best available scientific information. In response to this therefore, all libraries play a significant role in providing access to data, research and knowledge that supports informed research and public access to information about coastal conservation. The National Library of Indonesia for instance, plays an important role in increasing the level of education and literacy for its population spread amongst thousands of islands where education is harder to access – many library services are provided by boat.

The Sustainable development goals predicted that, by 2030, it will provide universal access to safe, inclusive and accessible, green and public spaces, in particular for women and children, older persons and persons with disabilities. In response to this, Public libraries became an integral part of the city of Medellín, Colombia's urban renewal strategy. Strategically located in some of the most disadvantaged communities in the periphery of Medellín, they have become centres for social development that address an identified need for more cultural and education space. The Library Parks represent a series of public libraries that offer educational tools and programs to benefit the local communities, as well as providing a hub for further urban development and green projects (*Library Parks*).

Information Technologies in Libraries for Community Engagement
With the emergence of ICTs, the librarians can supersede the creation of library users' club. This can be done through the use of social media tools like facebook, blog, what's up etc. sometimes even radio stations are used for that purpose. This involves a situation where participants gather at a particular time and on a particular platform and discuss in terms of their own situation.

Moreover, with the ability of computer to manipulate and transform things to look attractive, the librarians can create a pop-up menu on the internet asking their users to click for a particular relevant information affecting them. To achieve this effectively, it is expected for the librarians to use large words that can easily be seen by their audience. Simple style are more easily read than complex styles and to avoid confusion and colour riot, use only two or three colours. A combination of contrasting colour were suggested by Ogunbameru (2001) which could enhance legibility and appeal. These are; - .a. *Orange and Blue*   b. *Purple and White*   c. *Greece and Red*

For multiple colours try this combination
a.   Green, Blue and Orange   b. Green, Purple and Orange
b.   c. Green, Orange and Yellow   d. Brown, Red, Yellow and Green
e.   Green, Yellow and Purple

In addition to the above, librarian must enhance the legibility of the words by focusing on sizes, table, style, spacing and contrast. Hence, it is necessary for librarians to have the skills of power point, CorelDraw, database management and word processor.

Mobile Phones: Mobile phones play important roles to librarians in engaging a community of users with information needed for sustainable development. Mobile phone is a personal device, it brings a speaker into the room just as that the speaker was there in person. Messages on phones reaches almost everywhere and library user can assess it in their homes, cars, farms, shops, classes etc. This technology permits users to take their mobiles wherever they go and it offers immediacy and can be changed quickly to meet new conditions. The use of this technology by librarians also provides warmth of human voice and can tie into the strong oral traditions of communities and overcome the literacy barriers of print media which helps in attracting the interest of library users having low literacy level. This helps in achieving Target 16.10 of the sustainable development goals which is to ensure public access to information and protect fundamental freedoms, in accordance with national legislation and international agreements (Bradley, n.d). Moreover, telephone involves personal discussions between the librarians and the library user. The call may be initiated by either the user or the librarians himself. Such calls are useful in giving specific information or advice, making request or answering users' questions there by attracting them to the services provided by the library. Bradley added that, for ensuring universal access to affordable, reliable and modern energy services. The Katatura public library (Namibia) provides public access to ICT, study rooms, and classes, using mobile phones.

Through the application of Information technology, a librarian can employ a tool like CD-Rom technology to adopt demonstration as a guidance technique. A CD-Rom technology use in Africa and Nigerian libraries is no longer in doubt (Ugah, 2005). In University of Botswana library, twenty CD-Rom databases are available for use by its readers. In Nigeria, Idowu and Mabawonku (1999) reported that 18 of the libraries surveyed had CD-Rom facilities installed for use. A demonstration is a simultaneous and oral explanation of skills. A demonstration must be interesting and at times dramatic. According to Ogunbameru (2001), a demonstration can be used to:

Supply new information or knowledge, Visualize a process or skills clearly to the audience. It holds a person's attention better and longer than seeing or hearing alone and give person an idea of relationship of the various steps in the process.

For Demonstration the Librarians need to Have all the needed tools and materials, Know how to explain each step, be sure all users can see and hear, Keep the demonstration simple, summarize the demonstration and ensure that clients can use the skills or processes demonstrated (Ogunbameru, 2001).

Radio: is one of the fastest methods of communicating with a mass audience (Agbamu 2006). Radio enjoys a number of discrete characteristics which have contributed to its wide spread use by librarians in engaging their community of users. Radio can actually overcome the barriers of space and time. This medium commands a universal audience by geographic spread, income, education, age, sex etc. it is good for librarians working in public librarians whose services are not restricted to certain members, but to every member of the society without discrimination. Librarians need to understand the listening habit and interest of their users in order to build up interesting programmes to put across useful information logically and effectively. This is because; a house wife can iron or bake while picking up tips

from radio. Farmers can clean barns, mechanic can repair machineries, cattle rearer can feed livestock all within the sound of radio. It can inform and serve as a companion at the same time. It is a powerful instrument suited for spreading awareness of new ideas to large number of people and can be used to publicize library services. The radio can be used to alert library users on new library policies and on new arrivals. Since the advent of a battery-operated radio broadcast from radio stations are now received by rural communities thereby bridging the gap of literacy level of the library potential user. Another feature which made library publicity through the radio stations useful, is that most of the community members can understand. Such libraries can organize a radio programme inviting users who have successfully enjoyed their services and arouse the interest of other community members on such services. Though, radio is generally perceived as a medium of entertainment, and it is difficult to hold listeners' attention and not suitable for giving precise information. However, since most radio programmes are short lived and may not be repeated, the librarians should endeavour to record such broadcast and programmes such that they could be played back to users some other time.

Television: Television is particularly useful in assisting the audience to better understand and remember the subject matter presented. It offers the user an opportunity to employ two major senses of seeing and hearing. Through the television, the libraries can give a short talk or conduct a personal discussion on a topic of interest to the library user. Two types of television media are available for the librarian in attracting the community of users. The first is the broadcast areas. In this case library programmes can be transmitted to target audience through television stations. It is important however, to study the geographical area that the transmission station covers (Agbamu, 2006). Television media also involves the use of television monitors which require video tape recorder and video cassette. The librarian can prepare programmes and talks covering various library practices which are then recorded to a group of users. However, television is mostly viewed as a medium for entertainment. It has the quality of direct address, every viewer thinks as if he is being talked with personally. Television images can produce only limited details, it also encounter great problems regarding copyright materials. And it cannot be interrupted slowed down or speed up at will to suit the viewers, and it is more or less one way of communication.

Computer: a computer is one of the powerful devices for storing and processing information. Widespread use of computers has helped librarians to develop several computer based services and techniques. Word processors and laser printers are increasingly being used in information centres, printing houses and libraries. It is possible to attract library users by having graphic illustrations that can facilitate comprehension. Computers via satellites can take pictures of clouds to accurately forecast weather conditions and with remote sensing can accurately work out land use, area under forest and the like. Satellite communication has become part of our communication systems. It plays an important role in reaching millions of people spread throughout the corners of a country, in achieving more accuracy in weather forecasting and transmission of various educational programmes for schools and colleges and of development programmes for community of users (Sandhu, 1999).

Interactive Video Disc: The interactive video disc system consists of a microcomputer, video disc player and a computer. The monitor accepts signal from both the computer and disc player. This enables simultaneous presentation of video images, text and computer graphics on screen. The computer can store a massive amount of organized information which may be made available for individualized instruction to meet the needs of particular users. According to Sandhu (1999) video and audio cassette were previously available only to the elite, now they are owned by a large population including libraries. Pre-recorded cassette with music, songs, religious philosophy have become very popular in our modern libraries. Realising this potential, several university libraries have began to produce and supply prerecorded audio and video cassette to their users. The Punjab agricultural library in India gave a lead in this regard by recoding the first prerecorded audio cassette in September 1985 which are being used by farmers.

Overhead Projector/Transparencies: The use of overhead projector/transparencies during user-orientation helps to save the library user's time during presentation since diagrams and other illustrations can be projected on a screen for the library users to see. Library users can be attracted to such services since their time is not considered wasted. The librarian delivering user orientation is able to face the audience and can point out the features of his library appearing on the screen by pointing to the material on the projector stage. This is why it is often called an electronic black board.

The librarians' role of dramatization processes is greatly enhances through the use of modern technologies. Library drama involves the use of fiction to deliver a library message by dramatizing roles and situations. It uses social methods to market ideas and act as vehicle for teaching and passing information. In some instances, librarians use actualities by recording the voice of persons that spoke. This involves producing the speech of an actual person because in videos pictures tell the story better.

Conclusion and Recommendation

Sustainable development is a preoccupation of every one and a global phenomenon that has awaken the role of librarians in the information technology era. Essentially libraries are crucial to societal development and sustaining them in the light of sustainable development would eradicate all forms of ignorance and greatly ensure literacy level needed for sustainable development. The roles of librarians in community engagement for Sustainable development encompass those initiatives that ensures;

1. Information networking and knowledge transfer
2. Preserving information about cultural heritage of societies
3. Information literacy and life-long learning, including information media education
4. Promoting information using ICTs to provide equitable access to information, not only those of education alone but including those of governance and leadership.
5. Provide Information Resources in support of researchers that are aimed at improving local and global situation situations affecting the sustainable development of man and his environment.

Based on this, engaging library users through information technologies represent collaborative initiatives that help build sustainable communities.

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