

# **The quest for a development-oriented information society in the sub-Saharan Africa: implications for CPD programmes of LIS professionals in the region**

**Joseph M. Kavulya**  
**Catholic University of Eastern Africa**  
**P. o Box 62157-00200**  
**Nairobi, Kenya.**  
[jkavulya@cuea.edu](mailto:jkavulya@cuea.edu) / [jkavulya@gmail.com](mailto:jkavulya@gmail.com)

## **How to cite this paper:**

Kavulya, Joseph M (2009), The quest for a development-oriented information society in the sub-Saharan Africa: Implications for CPD programme of LIS professionals in the region. *The Maktaba: A Journal of the Kenya Library Association*, Vol. 9, pp. 174-183.

## **ABSTRACT**

This paper reviews key values and skills that CPD initiatives for LIS professionals in the sub-Saharan region should focus on to enable them effectively contribute to the transformation of the region into an information society. The article argues that LIS professionals in the sub-Saharan countries can contribute to the transformation of the region to a development-oriented information society. In so doing, they will contribute to social development and specifically the attainment of Millennium Development Goals. To be active participants in the emerging information society LIS professionals in the region must possess certain values, skills and knowledge in areas such as advocacy, management and leadership, ICT and research. They should also be conversant with contextual issues relating to the global information society such as sustainable development, information literacy, gender and development, globalisation, human rights, and, ethics. The findings in this paper lay the basis for further investigation and planning of CPD programmes in the region.

**Key words:** Continuing professional development; sub-Saharan Africa; information society; knowledge economy; Library services; Information and communication technology Library and information science;

**Category:** General Review

## **Introduction**

Continuing Professional Development (CPD) is widely viewed as strategic in ensuring effective performance at personal, organizational and national level (Browell, 2000; Smith, 2004). Simply put, CPD has been defined as ‘the systematic maintenance, improvement and broadening of knowledge and skills, and the development of personal qualities necessary for the execution of

professional duties throughout working life (The Records Management Association of Australasia, n.d). A review of literature reveals that the importance of CPD for LIS professionals is widely recognised across the globe due to d changes in organizations, the society, as well as professional knowledge and practice (Black, et al, 2002). This is to suggest that knowledge gained in initial degree or professional courses has useful lifespan (Redfern, 1995). Therefore LIS professionals cannot rely on the knowledge and skills learned years ago in formal degree programmes if they are to remain effective professionals.

Schon (1987) observes that no professional training can create a curriculum that is capable of addressing the complex world of practice indefinitely. Particularly, with the rise of the information-society, the requisite skills and competencies for LIS professionals have drastically changed and therefore CPD is imperative (Simmonds, 2004). This has triggered a review of existing CPD programmes world-wide so as to provide LIS professionals with knowledge and skills that are suitable to new needs in the information society (Smith, 2004b).

The aim of this paper is to explore the competencies that CPD programmes for LIS workers in the sub-Saharan region should address in the context of the current quest for a development-oriented information society in the region. The paper starts by examining the quest for national development in the sub-Saharan Africa and specifically, the status of the Millennium Development Goals. Secondly, it explores the concept of an information society so as to unravel some of the critical characteristics. Thirdly, the paper explores the key concerns in developing an ‘information society’ in the sub-Saharan region and the role of LIS professionals in its realization. Finally, the paper reviews the requisite skills and knowledge that need to be addressed by continuing professional development initiatives that will enable LIS professionals in the region to participate and contribute to the creation of a viable information society.

### **Development, and the attainment of MDGs in Sub-Saharan Africa**

The term ‘development’ is used widely to refer to economic, social and political advancement which results in sustained rise in the living standards for an increasing proportion of a population (Hodder, 2000). According to this definition development implies a positive change in the all dimensions of life for all members of a society regardless of class, age, gender, ethnicity and geographical considerations.

During the Millennium Summit in September 2000, world leaders passed the Millennium Declaration which formally heralded the Millennium Development Goals (MDGs) to be achieved by the year 2015 (Watkins, et al, 2005). These are development targets centred on: eradicating extreme poverty; achieving universal primary education; promoting gender equality and empowerment of women; reducing child mortality; combating HIV/AIDS, malaria and other diseases; ensuring environmental sustainability and developing a global partnership for development and attainment of a more peaceful, just and prosperous world (Juma, 2005). Since then the MDGs have become the international benchmark in measuring and tracking human, economic and social growth in the developing countries.

Although a lot of resources have been used in development efforts in the sub-Saharan Africa, recent assessments have indicated that the region lags far behind others in the implementation of

the Millennium Development Goals (MDGs) (World Bank, 2005). For example the region continues to experience low income for the majority of people, inadequate housing, poor health, limited or lack of education, low life expectancy, low literacy levels and high mortality rate (Watkins et al, 2005). This economic and social stagnation in the sub-Saharan Africa has been partially attributed to lack of relevant, accurate and timely information needed for activities in various sectors (World Bank, 1999; Economic Commission of Africa, 2003).

The availability, sharing and transfer of knowledge is viewed as prerequisite to viable policy setting and implementation, and therefore a tool for fighting problems such as poverty, inequality and environmental degradation. It is also viewed as essential in advancing education, research culture and technology as well as personal and professional development (Stehr, 2002; Kargbo, 2005; Assumpcao 2005; Huang and Russell, 2006 ITU, 2006). Many African countries in sub-Saharan region face serious problems in locating and using information and knowledge in areas such as technology options, health and agricultural production, governance and markets (Masawe, 2004; Economic Commission of Africa, 2003; ITU, 2006; Albright and Kigongo-Bukenya, n.d; ).

Consequently, there is emphasis that sub-Saharan countries like other developing countries invest more in information gathering, processing, distribution, access and application, through transforming into information society (Economic Commission of Africa, 2003; Chen and Dahlman, 2004). This will enable them to effectively utilise ICTs and information services, to close information and knowledge gaps various sectors so as to achieve faster development. In its declarations, the *World Summit on Information Society* (ITU, 2006) stated that the main challenge facing the nations today is to create a people-centred, development oriented information society. This is envisaged to be a society where citizens and communities can freely create, access, utilize, and share information and knowledge so as to achieve their full potential and improve their quality of life.

With the call for transition to knowledge-based society, LIS professionals in the sub-Saharan region find themselves in the vanguard of a revolution. This raises one key question: Do LIS professionals in the region have the requisite skills and knowledge to contribute to the ongoing transformation process to an information society? In the sub-Saharan region, historically, the LIS sector has never been part of mainstream processes of the local societies and, the role of LIS professionals has not been appreciated (Albright and Kigongo-Bukenya, n.d). At the turn of the 21<sup>st</sup> century whether LIS professionals in the sub-Sahara, will remain relevant from a societal perspective will largely depend on how they confront the challenges of creating a viable information society. Failure to embrace and to assume leadership in the evolving information society will lead to further marginalisation of the profession.

### **Transformation: key issues and the role of LIS professionals in the sub-Saharan Africa**

There are a number of concepts in literature that have been used in reference to information society key among them “knowledge society”, “and “information economy”. These terms emphasize the content or intellectual property that is being traded through an information market or knowledge market, respectively (Castells, 1998; 2000; Otto and Sonntag, 1985; Polat, 1977). Emerging from various debates an information society is characterized by:

- i. The ubiquitous position of ICTs in production, economy and society at large.
- ii. Dominance of the networking technology paradigm in its basic structure,
- iii. Use of knowledge through all its elements to empower and enrich citizens and bring about societal change,
- iv. Widespread use of information and knowledge as well as extensive lifelong learning to sustain innovation,
- v. High employment in the information services sphere for the country's all working population)
- vi. Globalization, economic and social cohesion-by establishing conditions for building borderless society and elimination of the "distance factor" and social homogeneity
- vii. High capacities to generate, organize, and disseminate knowledge and use it to create economic wealth and social goods for the community (MacKay, Maples and Renolds, 2001; Whitworth, 2003; ITU, 2006).

Currently, the progress in building the information society in any country is measured using the digital opportunity index (DOI). This analytical tool is structured around three components, namely: opportunity, utilization and infrastructure (ITU, 2006). Opportunity refers to the level of accessibility by the citizenry to ICTs and the level of their affordability. Accessibility is reflected by the percentage of the population with computers, telephony (fixed and mobile) and the internet. On the other hand, affordability is measured using two tariff indicators, namely: internet access tariffs (as a percentage of per capital income) and mobile cellular tariffs (as a percentage of per capital income). Utilization is the level of ICT usage and includes the proportion of individuals that use the internet (ITU, 2006). Infrastructure refers to all components that facilitate the functioning and use of the information superhighway including networks, fibre optics, computers, mobile technologies and a set of regulatory frameworks.

The sub-Saharan Africa has an average DOI score of 0.20 compared to the world average DOI scores of 0.37. Therefore the digital opportunity in these countries is still mostly expressed in terms of potential access to the information society that has not yet been realized (ITU, 2006). The main challenges that need to be addressed if the sub-Saharan Africa is to transform into a development-oriented information society include investment of ICT in all sectors of life, equitable access to ICT infrastructure; and access to relevant information and knowledge. There is also need to enhance information literacy, promote gender, human rights and ethical issues, protect African cultural diversity, entrench sustainable development and undertake research and innovation with the aim of promoting best practices in all aspects of information society. In this section, these issues are discussed with the view to showing the contribution that LIS professionals can make if the sub-Saharan Africa is to transform into a development-oriented information society.

***i. Poor investment of ICT in different sectors of life***

In an information society, investment in ICT in all sectors underpins all other processes of universal and affordable access to information and knowledge and transformation (Namhila, 2004; Dahlman, 2003). ICT greatly offers sub-Saharan countries an opportunity to reap potential

development benefits in all areas of socio-economic and political life. For example ICT can lead to:

- i. Improving efficiency and effectiveness of government management and delivery of public services
- ii. Reaching out to people and teaching democracy, promoting inter-ethnic harmony, transparency and good governance
- iii. Improving basic and higher education by facilitating distance learning and providing remote access to educational information resources
- iv. Enhancing capacity for the development of human resource skills and competencies through access to information and knowledge (Dutta, 2005; Gillwald, Burton and Stavou, 2005; Jain, 2006; Mutula, 2005).

In order to benefit fully from the ICT development, there is need for the sub-Saharan countries to adopt ICTs as tools of choice for development efforts. However, the use of ICT in the region faces problems such as; access gaps between regions and communities; inappropriate government policy towards ICT; digital illiteracy; lack of skilled manpower; poor power supply; resistance to change and inadequate exposure to ICT for vast majority of the populace (Gillwald, Esselaar, Burton and Stavou, 2005). In order to facilitate greater penetration and access of ICTs, LIS professionals need to advocate for, first, the creation ICT strategies that are linked to national and regional strategies for development and poverty eradication, and a favourable climate for private investment through carefully crafted regulatory frameworks. Secondly, incorporation of ICT into all aspects of development assistance, and international standards to encourage regional co-operation and sharing of information and data, and thirdly, adaptation of ICTs to the local needs in terms of languages cultures and application

#### ***ii. Inequitable access to ICT infrastructure***

The basis for an information society is ensuring that citizens have convenient and affordable access to ICTs. Currently, in the sub-Saharan region, there is unequal access between income groups and rural and urban populations in the region (Namhila, 2004; Mutula, 2002; Jain, 2006). Consequently, new inequalities are being created around the ability to access ICTs and application of information to create new knowledge. Particularly, in rural areas the lack of ICT expertise and high communication costs have been singled out as the main challenges in the equitable access to ICT infrastructure.

If the digital divide is allowed to persist or widen, some sections of the region will translate into limited opportunities for economic, social and political benefits of the information society for some sections of the population (World Bank, 2005; Kari, 2007). In developing an equity-based information society in the sub-Saharan Africa LIS professionals should champion the needs of the marginalized and vulnerable groups of society including the internally displaced persons and refugees, unemployed, youth, poor, disabled and children. There is also need to ensure that those living in remote, rural and marginalized urban areas to have access ICT. This can be achieved through advocating pro-poor strategies, ensuring indigenous content creation, and addressing local information and knowledge needs.

#### ***iii. Lack relevant information and knowledge content***

Economic poverty is directly related to the information and knowledge gaps experienced in many developing regions such as the sub-Saharan Africa (Mukoma, and Ogechi, 2005). This is caused by the lack capacity to acquire and generate knowledge in the most important sectors in progress in fields such as agriculture, health, education, human resources and environmental management, and in business and industry (Huang and Russell, 2006; UNESCO, 2002; Stiglitz, 1999; Masawe, 2004; Namhila, 2004). LIS professionals in this region should be in the forefront in ensuring that mechanisms are put in place for accessing the unlimited global information and knowledge that is available for various human activities.

At the same time it is important to bear in mind that global information can only be useful if it is relevant to the local situation and the day-to-day tasks of the people (Kebede, 2004; Kavulya, 2007). This can be achieved by the creation, dissemination and consumption of local content, adapting global knowledge to the needs of the local communities and making local indigenous knowledge (IK) making electronically accessible (Ballantyne, 2002; Emadi, 1998). It can also be knowledge management strategies at organizational and community levels. The development of local content suited to domestic or regional needs will encourage social and economic development and will stimulate participation of all stakeholders, including people in rural, remote and marginal areas (ITU, 2003)

#### *iv. Poor information literacy*

One of the main challenges faced by every nation in the knowledge era is to become a learning society and ensuring that its citizens are equipped with information literacy. Information literacy refers to a set of abilities requiring individuals to recognise and information need and have the ability to locate and use effectively the needed information (ACRL, 2000). Therefore it is essential in order to be able to participate and take full advantage of available information and knowledge. It is the basis for innovation because it provides the skills of accessing information and synthesizing it into new products. According to Bundy (2005), information literacy is a pre-requisite to participative citizenship in the information society, social inclusion, the creation of new knowledge and personal empowerment. Therefore it is vital to equitable access to information and building inclusive knowledge societies and bridging the digital divide (UNESCO, 2002)

In sub-Saharan Africa, the level of information literacy is generally poor. The vast majority of the people in the region-farmers, learners, developers, contributors, teachers, entrepreneurs and decision-makers- stand in need of skills for using the global information infrastructure. In a recent research, Kari (2007) found out that in Nigeria, the majority of rural dwellers are not aware of the availability of different types of information to assist them in their economic activities.

These problems require aggressive efforts to support skills and knowledge development that will enable information users to extract, evaluate, and use electronic information (Wong, 2003). Information literacy initiatives in the sub-Saharan region should aim at creating a information retrieval skills, and culture that value information and knowledge, decision making in all aspects of their lives. It should also address ethical issues such as copyright and intellectual and property rights.

**v. *Low level research and innovation***

Research has an important role in developing and applying information and knowledge in a creative way. LIS professionals should be concerned with the various issues of that affect the creation of an information society. Strategies for an information society should be guided well-researched analysis of user needs and should be evaluated to determine their impact on individuals, groups and communities. One such area of concern is cost-benefit analysis that can avert unnecessary waste of the scarce resources in the region. All these are only possible if there is a research based literature that supports the quest for an information society and develops the best practices (ITU, 2006).

There is also need to assess the success of programmes and policies that promote opportunity for specific social groups needs disaggregated ICT indicators. Policy making on information society can benefit from valuable research into existing disparities among the population and the impact of factors such as gender, age, income, educational level, employment status and rural/urban location. Boerkhorst (2007) has proposed the key elements of the research agenda in information society in Africa as open source software, academic repositories, freedom of information, role of libraries, and information literacy. There is also need to evaluate discrepancies and inequalities in access between geographical regions (the international digital divide) and regions within a country (the domestic digital divide). Through research it is possible to monitor the extent of existing inequalities, and can help policy-makers in their efforts to address differences to ICTs.

## **Contextual issues in sub-Saharan Africa**

**i. *Gender inequality, and concerns over human rights***

Gender inequality is a major obstacle for development. According to Hemmati and Gardiner (2001) none of the key pillars of development -environmental protection, economic well-being and social equality- can be achieved if gender equality is not properly achieved. At the same time it has been observed that there exists a ‘masculinity culture’ embedded within existing structures and discourses of the information society which serves to reinforce gender disparity and inequality (Civil Society, 2005). For the sub-Saharan region, it is important that information society programmes and strategies accommodate the principles of gender equality and women’s empowerment. This includes gender-informed ICT policies and capacity building that is focussed on women’s role in shaping of an information society at all levels including policy making on infrastructure, financing, and technology choice (Salas and Acceso, 2005; Jain, 2006).

Development has been linked to respect for human rights and therefore a call has been made that the information society should be based on human rights as laid out in the *Universal Declaration of Human Rights* (Civil Society, 2005) .Particularly, the common vision of information society for all’ adopted by the *World Summit on Information Society* seeks to promote an inclusive society-based on the fundamental right of human beings. These include creating a society in which everyone will be able to create, access, use and share information and knowledge (ITU, 2006). In the sub-Saharan region human rights violations region are aggravated by poverty, corruption, poor governance, political repression, civil strife and security concerns such as presented by terrorism. The issues of gender and human rights should be a

great concern for LIS professionals in the sub-Saharan region given that human rights violation in the region are aggravated by poverty, corruption, poor governance, political repression, civil strife and security concerns such as presented by terrorism.

**ii. *Concerns over sustainable development***

One of the targets of the MDGs is to ensure development through exploitation of environmental resources in a sustainable manner (Wong, 2003). In current scientific literature, there has been a growing convergence between the themes of information society and sustainable development (Dovers, 1992; Meadows, 1992, Willard and Maja, 2005). For example, it has been strongly argued that the elements of information society framework for development such as the use of ICTs in the fields of agriculture, environmental protection, management of natural resources, disaster prevention should be aimed at ensuring sustainable development (Lall and Garai, 2005).

Sustainable development has been identified as one of the myriad challenges facing the African continent (Cortez, Britz, Kigongo-Bukenya, 2008; World Bank, 2003). Currently, like other developing areas, the sub-Saharan region is faced by problems of environmental degradation which has been blamed on weak regulatory activity and incomplete information to guide priority setting and policy design (Willard and Maja, 2005). To reverse the situation there is need to advocate for strategies for acquiring in-depth information and better knowledge of environmental concerns in the exploitation of natural resources (Emadi, 1998). This requires that in creating information society sub-Saharan countries address the linkages related to sustainable development and how to exploit global knowledge for development purposes and to create appropriate environmental policies.

**iii. *Protection of African cultural diversity***

Cultural liberty is an important aspect of human development since it enables individuals to choose their identity without losing the respect from others or being excluded from other choices (UNDP, 2004). The sub-Saharan Africa is the home of diverse cultural groups, which is part of the common heritage of humankind. Therefore any viable information society in the region must seek to harness and preserve the cultural diversity, in the region for the future. This will not only enrich the information society but is in line with UNESCO's *Universal Declaration on Cultural Diversity* adopted in 2001 which affirms protection and the preservation of diverse cultural identities (UNESCO, 2002).

In the sub-Saharan region documentation and digitisation of the indigenous knowledge (IK) as preservation measure will diminish the possibility of its uncompensated exploitation in a globalized economy (ITU, 2003). It would also ensure that the communities concerned reap the economic benefits of exploiting this knowledge. It has been observed that in the face of the dominance of paradigms of over-developed countries in the Internet, societies in developing areas might become mere recipients and consumers of western knowledge and culture. This stresses the need for LIS professionals in the sub-Saharan region to promote the production and access to all content-educational, scientific, cultural or recreational- in diverse languages. It also underlines the need to develop local content that is suited to regional needs so as to stimulate social and economic development and participation of all stakeholders including people in rural areas, remote and marginal areas.

**v. *The continued devastation of HIV/AIDS pandemic***

Sub-Saharan Africa is the region of the world hardest hit by HIV/AIDS with 10% of the world's population but over 60% of the total number of HIV/AIDS cases. Women and youth have been identified as the populations most affected in the region with most new infections occurring in young adults between 15 and 24 Years. Experts have observed that by increasing the level of knowledge and awareness of HIV/AIDS and the availability of HIV/AIDS related services in the community, the spread of the disease may be slowed and the rate of transmission reduced (US National Council on Libraries and Information Science, 2005).

There is widespread awareness that information institution such as libraries as well as LIS professionals in the sub-Saharan can be change-agents in the fight against the HIV/AIDS scourge (Albright and Kigongo-Bukenya, n.d; Albright and Kawooya, 2007). First they can establish partnerships with other organizations already involved in the dissemination and education activities so as to step up the effectiveness of AIDS related information services. These include content developers, designers and printers and distributors. Secondly, they can expand the scope of information sources outside the role of traditional libraries. Thirdly, they can proactively assist the public with carefully and well organized information on AIDS which is repackaged, both in print and electronic formats (Ghosh, 2007). However in order to be effectively involved in the dissemination of HIV/AIDS information LIS professionals need to redefine their role in their role and appreciate the fight against HIV/AIDS as an appropriate activity for them that has the potential to strengthen their role as professionals . Even more important they need to equip themselves with current information related to the HIV/AIDS pandemic (Albright and Kigongo-Bukenya, n.d).

**Transition to an information society: Areas of concern for CPD LIS initiatives**

The issue of transition to information society is of urgent concern for LIS professionals and more so for those of the sub-Saharan region. The primary function of the information professional is to ensure that society will have the information it needs to function. From the previous discussion, LIS professionals in the sub-Saharan can contribute to creating a development-oriented information society in the region through various ways such as:

- i. Contributing to policy processes through expertise, skill and experience and knowledge in a range of information and ICT policy areas of access and use,
- ii. Advocating the socially responsible practices in the design, implementation and operation of information society projects,
- iii. Advocating for practices that ensure that political and market forces are accountable to the needs of all members of the society and centred on human rights, sustainable development and empowerment of marginalized groups,
- iv. Researching, developing and disseminating best practices in various aspects of information society,
- v. Advocating universal and equitable access to the information infrastructure and services of the information society through libraries and information centres,
- vi. Encouraging social responsibility and good governance practice in the context of information society,

- vii. Advocating information society projects and activities that are critical and profitable based on needs assessment,
- viii. Bringing perspectives of marginalized groups including excluded communities and grassroots activists,
- ix. Providing capacity building through promoting awareness of the potential which ICTs have, marketing of information services, information literacy skills activities and training for life-long learning,
- x. Networking and collaborating with other players such as government agencies, and donors in achieving a development oriented information society.
- xi. Creation and disseminating relevant local content in the form of online resources.

Continuing Professional Development (CPD) is the systematic maintenance, improvement and broadening of knowledge and skill and the development of personal qualities necessary for the execution of professional and technical duties throughout the practitioner's working life (Browell, 2000). In order to fulfil the above roles, LIS professionals need novel skills and competencies that are relevant to the information society.

According to Simmonds (2004) and Smith (2004b) there are three main challenges facing LIS workers in the information society. First, they need to keep their knowledge and expertise up to date by remaining in touch with issues relevant to their job and profession. Secondly, they have to develop existing skills and acquire new required for developing personally in the job. Finally, they have to broaden knowledge and skills of the workings of the information society so that they can provide to its development. This section outlines the elements of a multifaceted CPD program that will address the various needs of LIS professionals in the sub-Saharan region. The requirements can be divided into four broad areas which should be addressed through CPD initiatives, namely: management and leadership, ICT skills, research and electronic information retrieval skill and contextual issues relating to information society.

#### ***i. Management and leadership skills***

In the information society LIS professionals face the need for effective and informed leadership. According to Winston (2005) key leadership challenges in the information society are; increased accountability by funding agencies and other stakeholders, limited financial resources, enhanced competition, changing organisational structures; proliferation of ICTs in design and delivery of information services.

To face these challenges there is need for LIS professionals in the sub-Saharan region to acquire enhanced skills in the best practices of managing and leading competencies which include: ethics, effective communication skills; problem solving and decision making skills; time management; management of change; strategic planning; costing and cost-benefit analysis; total quality management; performance appraisal techniques; marketing and public relations skills; business negotiation skills. These skills will enable LIS professionals in the sub-Saharan Africa confidently to take up leadership in information related issues and strategies (Odini, 1999; Ondari-Okemwa, 2000; Ocholla and Bothma, 2007).

#### ***ii. Information and Communication Technology (ICT) skills***

The transition to an information society is underpinned by investments and use of ICTs in all spheres of human activity (Mutula, 2002). However, IT training has not been a core area of training for LIS professionals in the sub-Saharan region and therefore, a large majority of LIS professionals lack requisite ICT to operate in an electronic information environment (Jain, 2005; Mutula, 2002,). In the face of rapid technological innovations LIS professionals are expected to perform roles such as setting up and managing computer-based information systems, acquisition and organisation of electronic information resources; planning and providing digital information services; ensuring information security; setting relative standards, and training in the use of ICT in information and knowledge access.

These roles make it imperative for LIS professionals to acquire a variety of ICT skills such as: planning and management of electronic information systems; telecommunications and networking applications; management information systems; electronic content creation; electronic publishing; web page design and maintenance; searching of online electronic databases; searching CD-ROM databases; multimedia applications; knowledge management systems and use of Web 2.0 tools (Thapisa, 1999; Namhila, 2005; Rosenberg, 2006; Kavulya, 2007).

### *iii. Research and Writing skills*

Research and innovation are crucial to sustainable information related strategies. Evidence-based approach to the creation of information society will ensure that discourses and projects are informed by best practices and understanding of the issues needs and impact of information society activities to various segments of the society (Thapisa, 1999). At the same time, limited resources will mean that LIS professionals have to seek funding and also justify investments in information society projects. In this respect they need for skills such as: writing funding proposals; designing research proposals; data analysis techniques; needs assessment techniques; measurement and evaluation of services; preparing feasibility studies; report writing; present and project management skills.

### *iv. Contextual issues in information society paradigm*

From the above discussion there are areas of convergence between development and information society. These are contextual issues that have a bearing on the functioning of the information society to improve the well-being of individuals, organizations and societies such as sustainable development; gender and development, globalisation; information and human rights; ethical issues such as copyright and intellectual property rights, civil society and advocacy; regulatory and policy frameworks; HIV/AIDS, knowledge management, information literacy and lifelong learning. In order to contribute to the creation of a development-oriented information society, LIS professionals in the sub-Sahara require better understanding of these areas.

## **Conclusion and recommendations**

Information and knowledge have the potential to promote development and facilitate the achievement of the MDGs. Therefore the process of building an information society is vital in addressing the challenges of eliminating poverty, raising agricultural and industrial productivity and addressing the problems of education, gender, health problems such as HIV/AIDS, and sustainable development in the region. LIS professionals can play a vital role in the realisation of

the information society through a number of ways such as identifying and implementing information society projects in conjunction with other stakeholders; networking so as to share information on best practices of information society initiatives; participation in the processes of national information society planning in our countries such as creation of regulatory frameworks.

In order to benefit fully from the ICT development, there is need for the sub-Saharan countries to adopt ICTs as tools for development. Since 1995 countries in the region have efforts to provide universal access to ICT infrastructure. However, the use of ICT in the region faces problems such as; access gaps between regions and communities; inappropriate government policy towards ICT; digital illiteracy; lack of skilled manpower; poor power supply; resistance to change and inadequate exposure to ICT for vast majority of the populace.

In developing an equity-based information society in the sub-Saharan Africa LIS professionals can play a useful role by championing for greater access to ICT by the marginalized and vulnerable groups of society. These include the internally displaced persons (IDPS) and refugees, unemployed, youth, poor, disabled and children. There is also need to ensure that those living in remote, rural and marginalized urban areas have access ICT infrastructure such as quality telecommunication networks computers and electronic networks, mobile phone systems, and digital televisions. This can be achieved through advocating pro-poor strategies, ensuring indigenous content creation, addressing local information and knowledge needs, and addressing the pertinent issue of information literacy.

However for LIS professionals in the region to participate and guide the development of a viable information society, it is imperative that they possess understanding of the phenomenon of information society as well as skills and competencies to exploit its benefits for the good of their communities. Current CPD can be a catalyst which will enable LIS professionals in the sub-Saharan to improve their capability to contribute to the attainment of MDGs within the context of the information society. CPD programmes in the region should specifically target areas such as management and leadership, information and communication technologies, research and writing skills as well as pertinent areas of convergence between information society paradigm and development such as sustainable development; gender and development, globalization; information and human rights; ethical issues such as copyright and intellectual property rights, civil society and advocacy; regulatory and policy frameworks; HIV/AIDS, and information literacy. All these should be linked to the evolving paradigm of information society.

## References

Association of College and Research Libraries (2000), Information Literacy Competency Standards for Higher Education, American Library Association, Chicago, IL.

Albright, K. and Kawooya, D. (2007), "Libraries in the time of AIDS: African perspectives and recommendations for revised model of LIS education", *International information and Library Review*, Vol. 39 No 2. pp. 109-120

Albright, K and Kigongo-Bukenya, I. (n.d), "Libraries and AIDS in sub-Saharan Africa: realities of culture and curriculum, available: <http://doi.wiley.com/10.1002/meet.14504301278>

*The Maktaba: A Journal of the Kenya Library Association*, (2009). Vol. 9, pp. 174-183.

Assumpcao, D. A. (2005), "Socializing knowledge and reducing regional inequalities: Strategies for Brazil", in Willard, T. and Maja, A. (Eds.), *A Developing Connection: Bridging the Policy Gap between Information Society and Sustainable Development*, International institute for Sustainable Development, Winnipeg, pp. 161-183.

Black, et al, (2002). "Continuing education for LIS professionals in Canada", in Ward, L. W. (Ed), *Continuing professional education for the information society: The Fifth World Conference on Continuing Professional Education for the Library and Information Science professions*, Munchen: IFLA.

Ballantyne, P. (2002), "Collecting and propagating local content development content", URL: <<http://www.ftpicd.org/files/research/reports/report7.pdf>>. Accessed

Boerkhorst (2007), Towards information democracy: a research agenda, *International Review of Information Ethics*, Vol. 7 No. 9,

Browell, S, (2000), "Staff development and professional education: a co-operative model", *Journal of Workplace Learning* Vol. No.2, pp. 57-65.

Bundy, A. (2004), "One essential direction: information literacy, information technology fluency". *Journal of e-literacy* 1, 7-22

Castells, M. (2000), *The Rise of the Network Society. Information Age: Economy, Society and Culture*, Vol. 1. (2<sup>nd</sup> ed.), Blackwell, Malden.

Castells, M. (1998), *End of Millennium: the information age; economy, society and culture*, vol. 3, Blackwell, Oxford.

Chen, D.H.C and Dahlman, C. J. (2004), *Knowledge and Development: A Cross Sectional Approach*, World Bank, Washington.

Civil Society. (2005). Much more could have been Achieved: Civil Society Statement on the World Summit on the Information Society, available at <http://www.wsis-cs.org/>>

Cortez, E.M., Britz, J., Kigongo-Bukenya, I., (2008), "Strategies for continuing professional development of LIS faculty in sub-Saharan Africa. Paper presented at the World Library and Information Congress: 74<sup>th</sup> IFLA General Conference and Council, 10-14 august, Quebec, Canada", available: <http://www.ifla.org/IV/ifla74/index.htm> .

Dahlman, C. (2003), "World Bank knowledge economy: products and strategy", in, World Bank, *Knowledge for development*, Washington, DC: World Bank Institute, pp35-40.

Dovers, S. and Handmer, J. (1992), "Uncertainty and change", in *Global Environmental Change*, Vol. 2, pp. 262-76.

*The Maktaba: A Journal of the Kenya Library Association*, (2009). Vol. 9, pp. 174-183.

Dutta, S., and Lanvin, B. (2005), *The Global Information Technology Report 2004-2005*. New York, Palgrave: Macmillan, 2005.

Economic Commission for Africa. (2003), *African Information society Initiative: An Action Framework to Build Africa's Information Communication Infrastructure*. Addis Ababa: ECA.

Emadi, M. (1998). Indigenous knowledge, sustainability and empowerment Indigenous and development monitor, The Hague: Nuffic-CIRAN, available at [www.acdi-cida.gc.ca/cida-ind.nsf/0/2312f815643a63485256c590005fb687/open document](http://www.acdi-cida.gc.ca/cida-ind.nsf/0/2312f815643a63485256c590005fb687/open%20document)

Gillwald, A, Esselaar S., Burton P. A. & A. Stavou, (2005), Toward an e-Index for South Africa: Measuring household and individual access and usage of ICT, available at <<http://regulateonline.org/content/view/404/31/>>

Ghosh, M. (2007), ICT and Aids literacy: a challenge for information in India, *Program: electronic library and Information Systems*, Vol 41 No. 2, pp. 134-147.

Hemmati, M. and Rosalie Gardiner (2001), UNED Forum, as part of the 'Towards earth Summit2000 project, available at <[http://www.generoyambiente.org/ES/secciones/subseccion\\_23\\_28.html](http://www.generoyambiente.org/ES/secciones/subseccion_23_28.html)>

Hodder, R. (2000), *Development Geography*. London: Routledge,.

Huang, J and Russell, S. (2005), "The digital divide and academic achievement", *The Electronic Library*, Vol. 24 No. 2, pp. 160-173.

IFLA, (2005). Alexandria Manifesto on Libraries, Information Society in action. Bibliotheca Alexandrina.

ITU (2006), *World Information Society Report 2006* (WISR), available at <http://www.itu.int/osg/spu/publications/worldinformationsociety/2006/index.html>

Jain, P. (2006), "Empowering Africa's development using ICT in a knowledge management approach", *The Electronic Library*, Vol. 24 No. 1, pp. 51-67.

Juma, C. (2005) Universities in Economic Renewal: Enlisting New Sources of Development. In: Kenyatta University. *The role of African Universities in the Attainment of the Millennium Development Goals: A Publication of selected papers presented at the MDG Conference held on November 14-18, 2005*. Nairobi: Kenyatta University, pp. vii-xvii

Kargbo, J.A (2002), "Narrowing the information divide", *International Information and Library Review*, Vol. 34, pp. 97-105.

Kari, H. (2006) "Availability of and accessibility of ICT in the rural communities of Nigeria. *The Electronic Library* Vol. 25 No.3, pp.363-372

*The Maktaba: A Journal of the Kenya Library Association*, (2009). Vol. 9, pp. 174-183.

Kavulya, Joseph M (2007), "Digital libraries and development in sub-Saharan Africa: a review of challenges and strategies", *The Electronic Library*, Vol. 25 No.3, pp. 299-315

Kebede, G., (2004), "Information needs of end-users of sub-Saharan Africa in the digital information environment", *The International Information and Library Review*, Vol 36 No 3 p.181.

Lall, A. and Garai, A. (2005), "Capturing the voices in the information society and sustainable development: The policy dialogue in India" in Willard, Terry and Maja Andjelkovic (Eds.), (2005), *A Developing Connection: Bridging the Policy Gap between information society and sustainable development*, Winnipeg: International institute for Sustainable Development, 2005, pp. 129-159

Mackay, H., Maples, P., and Reynolds, W (2001), *Investigating the Information Society*, Routledge, London.

Masawe, M. (2004), ICT Access initiatives for rural areas in Tanzania: an overview of rural community telecentres in Tanzania (1999 to 2003). In *Towards a Knowledge Society for African Development: papers presented at the 16<sup>th</sup> Standing Conference, Central and Southern Africa Libraries and Information Associations (SCECSAL XVI) 5<sup>th</sup>-9<sup>th</sup> July 2004, Kampala*. Kampala: Uganda Library Association, 2004.

Meadows, D and Randers, J. (1992), *Beyond the Limits: Global Collapse or a sustainable Future*, Earthscan, London.

Mukoma, C. and Ogechi, E.B. (2005), "Information: The Missing link in Poverty Reduction". In Kenyatta University. *The role of African Universities in the Attainment of the Millennium Development Goals: A Publication of Selected Papers Presented at the MDG Conference held on November 14-18, 2005*. Nairobi: Kenyatta University, pp2-15.

Mutula, S. (2002), "The digital divide in Sub-Saharan Africa: Implications for revitalization and preservations of indigenous knowledge systems. A paper presented at the SCECSAL-15 Conference April 2002, Johannesburg.

Mutula S M (2005), "Bridging the digital divide through e-governance: A Proposal for Africa's Libraries and Information Centres", *The Electronic Library*, Vol. 23 No 5, pp. 591-602.

Namhila E. N. (2004), "World Library and Information Congress: 70<sup>th</sup> IFLA General Conference and Council, 22-27 August 2004, Buenos Aires, Argentina

OECD. (1981), *Information activities, electronics and telecommunications technologies: impact on employment, growth and trade*, OECD, Paris:

OECD (1986), *Trends in the information economy*, OECD, Paris.

*The Maktaba: A Journal of the Kenya Library Association*, (2009). Vol. 9, pp. 174-183.

Ocholla, D.N and Bothma, T. (2007) “Trends, challenges and opportunities of LIS education and training in Eastern and Southern Africa” *New Library World*, Vol 108 No 1/2, pp. 55-78

Ondari-Okemwa, E. (2000) “Training needs of practicing professional librarians in the Kenyan public university libraries: a critical analysis”. *Library Management*. Vol. 21 No. 5 pp. 257-268.

Otto P. and Sonntag, P. (1985), *Wege in die informationsgesellschaft*. Dtv Munich:

Polat, M. (1977), *The Information Economy*, US Department of Commerce, Washington, DC.

The Records Management Association of Australasia, (n.d). “Compulsory Continuing Professional Development (CPD) Scheme”, available: <http://www.rmaa.com.au/docs/profdev/index.cfm>. Accessed

Redfern, M (1995), “The condition is critical: continuing professional development of library and information services staff”, *Health Libraries Review*, 12, 13-21

Rosenberg, D. (2006), *Towards the digital library in Africa: findings of an investigation to establish the current status of university libraries in Africa*, INASP, Oxford.

Salas, M. and Acceso, F. (2005), “Women as professionals in the Costa Rican Information technology sector: Exploring the relationship between sustainable development and gender gaps in the information society”, in, Willard, Terry and Andjelkovic, M. (Eds.), *A Developing Connection: Bridging the policy gap between information society and sustainable Development*, International institute for Sustainable Development Winnipeg, pp. 87-124

Schon, D. (1987) *Educating the Reflective Practitioner* San Francisco: Jossey Bass

Simmonds, P. (2004), “Continuing professional development and workplace learning 2: CPD and you-how CILIP is meeting the continuing professional development needs of its members”, *Library Management*, Vol. 24 No. 3, pp.169-170.

Smith, I W. (2004a), “Continuing professional development and workplace learning 6: HRD and organizational learning, *Library Management*, Vol. 125 No. 1/2, pp. 64-66.

Smith, I W. (2004b), “Continuing professional development and workplace learning 10: Human resource development- the policy imperative”, *Library Management*, Vol. 25 No. 8/9, pp. 401-403

Stehr N. (2002), *Knowledge and Economic Conduct*, University of Minnesota Press, Toronto.

Stiglitz, (1999), *Public policy for knowledge*, Routledge, London.

Thapisa, A. (1999) Developing lasting competencies for a twenty-first century information economy workforce in Africa. *Library Management*. Vol. 20 No. 2, pp. 90-99

*The Maktaba: A Journal of the Kenya Library Association*, (2009). Vol. 9, pp. 174-183.

UNDP (2004), *Human Development Report 2004: Cultural Liberty in Today's Diverse World*, Oxford, New York:

UNESCO. (2002), *UNESCO Universal Declaration on Cultural Diversity*. Paris, UNESCO.

US National Council on Libraries and Information Science, (2005), *The role of libraries in HIV/AIDS dissemination in sub-Saharan Africa*, Washington DC: NCLIS.

Watkins, K et al (2005), *Human Development Report 2005: International Co-operation at Crossroads; Aid, Trade and Security in Unequal World*, UNDP, New York.

Willard. T., and Maja A. (Eds.) (2005), *A Developing Connection: Bridging the policy gap between information society and sustainable Development*. Winnipeg: International institute for Sustainable Development.

Whitworth, A. (2003), "Information society" in Feather, J. and Sturges, P. (Eds.) (2003), *International Encyclopedia of Information and Library Science*, 2<sup>nd</sup> ed. Routledge, London.

Winston, M. K. (2005), "Ethical leadership: professional challenges and the role of LIS education", *New Library World*, Vol. **106** No. 1212/1213, pp. 234-243.

Wong, E. (2003), "Analysing the contribution of continuing education and leadership empowerment to sustainable development experiences from a Hong Kong tertiary institution", *International Journal of Sustainability in Higher Education*, Vol. 4, pp. 364-374

World Bank (2005), *African Development Indicators 2005*, World Bank Washington D.C. 2005.

World Bank, (1999), *World Development Report 1998/99: Knowledge and Development*, Oxford, Washington D.C.

World Bank. (2003), *World Development Report 2003: Sustainable Development in a Dynamic World: Transforming Institutions, Growth, and Quality of Life*, Oxford, Washington D.C.

World Bank. (2005), *World Development Report 2006: Equity and Development*, The World Bank, Washington DC.

### **Autobiographical Note**

Joseph M. Kavulya is the Acting University Librarian at the Catholic University of Eastern Africa, Nairobi, Kenya. He holds a B.A (Sociology and Literature) and M.Ed (Library and Information Science) from Kenyatta University, Kenya and a PhD (Library and Information Science) from Humboldt University, Berlin and an Associate Professor of Library and Information Science at the Catholic University of Eastern Africa, Nairobi, Kenya. His areas of research interest are information and development, information literacy, LIS education, management of information services and emerging communication technologies.

Address: P. O Box 6768-00200, Nairobi, Kenya; Email: [jkavulya@gmail.com](mailto:jkavulya@gmail.com); Tel: +254727381147

*The Maktaba: A Journal of the Kenya Library Association*, (2009). Vol. 9, pp. 174-183.