

## **Educating the Health Librarians in Africa today: Competencies, Skills and Attitudes required in a Changing Health Environment**

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### **Abstract:**

*The changing health environment in Africa has made the work of health librarians more interesting and challenging at the same time. The changes brought about by advances in Information and Communication Technologies and increased need for consumer health information due to outbreak of new and lifestyle diseases have defined a new niche for health librarians and necessitated a change in their roles. Health librarians are facing added challenges requiring a person who is better equipped and well educated in the profession. For library and information sciences schools in Africa, these changes have necessitated continuing evaluation of the curriculum and re-designing of the courses to respond to new market needs. The objectives of this study were to establish the extent to which information science schools in Kenya offered courses that imparted competencies and skills required by health information professionals; and to establish a range of competencies, skills and attitudes required by health librarians in Kenya in order to be effective in the changing health environment. The findings show that a range of skills and competencies are required for health science librarians to function effectively and efficiently in the current health environment in Africa. The results also show that LIS schools in Kenya have not adequately addressed competencies and skills required by health librarians Health librarians need to be proactive in acquiring skills and competencies that will help them support health care.*

**Keywords:** Health Librarianship-Kenya; Health Information Professional- Competencies and Skills; Continuous Professional development; library and Information Science Education

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## **Introduction**

Library Science profession has changed enormously in the last decade. While the profession has been evolving, adapting to new technologies, new media and the ever changing needs of users, the internet has drastically increased the range of information available and the way in which it is delivered. The Internet has caused an information overload that requires to be filtered for reporting only selected data at the point of need. Health information has been globalized making the world one enormous collection of information (Cleveland, 2011). Further, technological trends such as cloud computing, mobile technology, electronic records, automatic compilation of data for quality reporting, digitization of information, new modes and methods of scholarly communication, and availability of new health information resources and the fact that the society is now aware of the importance of information in health care management necessitates new competencies, skills and attitude in health information service delivery. The changes coupled with intense research in health and bioscience and changes in health care provision has significantly changed the role of health librarians. Health librarians are now more than ever before required to partner more directly with those that they serve by being the other health-care professionals, researchers and educators.

In Africa the need for competent and well-skilled health information professionals due to numerous health challenges is great. Health information professionals are needed to help train the general public on how to locate quality health information from the internet, to collaborate with physicians to help them in research and locating authoritative information and many other responsibilities to support health care provision. Health librarians are increasingly facing added challenges hence requiring a person who is better equipped and well educated in the profession. For library and information sciences schools in Africa, changes in health care environment and practice necessitate continuing evaluation of the curricula and re-designing of the courses to respond to these changes. Since the rise of Information and Communication Technologies (ICTs), most of the technologies taught in the 1990s are now outdated. Information Science schools are therefore challenged to examine the competencies required by health information professionals in this age of ICTs for better health care in Africa. The study identifies competencies, skills and attitudes required by health librarians in the changing health environment in order to effectively help tackle health challenges. The study also looks at how information science schools have responded to the training needs of health information practitioners in Kenya.

## **Problem**

Health librarians working in health organizations in Kenya today lack adequate skills and competencies required to meet challenges of 21<sup>st</sup> century in health care. In order to propel and enhance efficiency and proficiency in health care in this turbulent information environment, information science schools should strive to meet their graduates' real job settings. Lately, there has been demand in Kenya by the industry for graduates that are well trained and have competencies that meet industry job requirements including health organizations. In developed countries, skills and competencies required for health information profession have been to a large extent addressed in the curricula of information science schools. However, in Kenya there is no evidence that the skills and competencies required by health librarians are adequately covered in information science curricula.

## **Objectives of the Study**

The objectives of this study were to: establish the extent to which information science schools in Kenya offered courses that imparted competencies and skills required by health information

professionals; and to establish a range of competencies, skills and attitudes required by health librarians in Kenya in order to be effective in the changing health environment.

## **Literature Review**

Medical Science is said to be one of the most dynamic and 'sensitive' field. In this regard, health information centres support the information needs of medical educators, professionals, students and patients. Health librarians are therefore called upon to 'create their future within the health sector' and to apply specialized skill set in order to add value and benefit right across the health sector' (Health Science Libraries Group, 2010). This call makes more sense today more than ever before due to the widespread changes in the information sector and health care environment. Odi (1999) observes that, the changing information environment requires a workforce that is familiar with emerging ICTs. He further suggests that, librarians should have competencies that march the traditional skills and the emerging skills in order to effectively deliver services to the users in the new millennium.

Available literature recommends different competencies and skills set required for professional success of health librarians (MLA, 2014; Sen, Villa & Chapman, 2014; Kane, 2011; SLA, 2003; Gorman and Corbitt, 2002; Cheng, 2001; Goulding et.al., 1999; Anderson, 1989). However, Ullah and Anwar (2012) argue that no universally accepted competencies can be developed. Medical Library Association (MLA) (2014) developed comprehensive list of major professional and personal competencies for information professionals working in health organizations highlighting such area as: an understanding of the health environment and information policies and the changing information and health care environment; possession of specialized knowledge, skills and understanding of leadership and management in order to be able to weave information principles into the fabric of complex health institution environments; knowledge of the content of information resources and skills in using them; skills and knowledge in health science resource management; knowledge and skills in information systems and technology; ability to teach ways to access, organize, and use information to solve problems; and ability to use published research to either provide services to end users or to improve practice as information professionals. Similarly, Special Library Association (SLA) has developed key competencies for special librarians in the 21<sup>st</sup> century (SLA, 2003).

Sen, Villa, & Chapman, (2014), identified the following skills: Library and Information Science-specific skills such as cataloguing, classification and other knowledge of information sources in health science; information literacy skills; management skills; technical skills; pedagogical skills; personal attributes; and interpersonal skills. Kane (2011) argues that, primary skills required by health librarians should include: subject expertise coupled with knowledge of the discipline and research skills within the discipline; communication skills; public speaking; technical skills; project management skills; and ability to adapt to change. Kane believes that information professionals working in special libraries should have a deeper knowledge of the discipline(s) covered in the organization that they serve. Kane further argues that such librarians are supposed to keep up with changing technologies and developing concepts within their subject areas.

Gorman and Corbitt (2002) state that, there is need for competencies in knowledge of clients' needs, management of people and resources, utilization of technology and organization of knowledge and knowledge resources. Cheng (2001) outlines core competencies required by information professionals in order to adapt to new environment. She adds that information professionals in health care organizations should have a business sense and possess specialist

skills that will effectively contribute to evidence-based practice in health care. Goulding, et.al. (1999) give ideal attributes required by information professionals such as pro-active, assertive, outgoing, patient, analytical, positive, self-motivated and trustworthy. These attributes are applicable in health information environment today.

Anderson (1989), cited by Ullah and Anwar (2012) highlighted the characteristics that are key for the reformation of medical librarianship to meet the present and future needs. He offers that health librarians require technical literacy, research competency, service orientation, management abilities, leadership qualities, and organizational knowledge. His opinion is relevant in the present health information scenario.

### **Education and training of health librarians in Kenya**

There is limited evidence of research on training needs of health librarians working in health organizations in Kenya and yet the need for health information professionals is increasing. Health librarians require specialist skills and other competencies in order to provide effective service to their clients. These specialized training can be gained from Library and Information Science educators, self-directed learning, on-the-job training or from mentoring and collaboration (Lawton & Burns, 2014). Universities training information professionals in Kenya don't have adequate specialized courses in health information. But this is done as a general LIS degree course. For instance, there is only one elective courses taught at master's level at School of Information Science in Moi University that attempt to teach health information systems and sources in Kenya (Moi University, 2015). This course does not adequately impart knowledge required for librarians working in health organizations. To facilitate the acquisition of competencies and skills currently lacking in health organizations, Milne (2000) encourages educators to design courses that will enable students to develop much-needed skills. She adds that learning experiences must include creative assessment items that reflect the real world of work and provide the opportunity for the development of the skills, experience, attributes, and behavior that are found lacking. Likewise, Rehman (2008) urges that curriculum needs to be conceived in relation to market needs and employer perceptions about the competencies of information professionals. Goulding et. al. (1999) advice Information Science schools to alter their curricula so as to incorporate courses which promote the characteristics required to produce graduates able to cope with the changes and challenges of modern information work. Buttlar and Du Mont (1996) state that educators need to broaden information school curricula to include the varied interests and skills base of their students. They conclude that education should be geared toward educating the whole person to fit well into the culture of a particular setting, regardless of job requirements.

### **Methodology**

A descriptive survey was done. The researchers purposively selected five health organizations in Kenya to collect data on competencies and skills required. These organizations were selected because of their size and their role in health information provision. The selected organizations included hospital libraries and university libraries offering health science programs. Data was collected using a questionnaire that was distributed physically and online to selected health librarians. MLA instrument on competencies for lifelong learning and professional success developed in 2014 was used to design the questionnaire and collect data. This instrument was chosen because it provided broad and specific competencies and skills applicable to all working environments in health science. Researchers also gathered information from literature and websites of different universities in Kenya that offer training in Information Science.

## **Results and Discussions**

**Objective I:** To establish the extent to which information science schools in Kenya offered courses that imparted competencies required by health information professionals.

The purpose of this objective was to find out whether information Sciences schools offered courses geared towards impacting skills and competencies required in health science information management and service delivery. Three key institutions offering training in library and information science courses were invited to participate in the study. MLA instrument was used to assess the courses offered by the schools. The following were the findings.

### **Health Science environment**

From the study the extent Information Science schools in Kenya have addressed competencies and skills required by health librarians were varied with respect to the competencies related to knowledge of health science environment. Courses offered on Health Science environment were found to be similar in the three universities. Specific courses under health science environment such as ethics, copyright and other legal issues and major programme and policy issues were offered by two of the universities. However, knowledge of the Health Sciences discipline, cultural concerns health care was not taught in any of the university.

### **Management and leadership competency**

From the study, two universities cover this competency in their curricula to some extent. Specific courses being taught by the three universities included public relations, marketing, and advertising services, oral and written communication and interpersonal relations as management and leadership competencies. In addition one of the universities was offering strategic management, finance and budgeting courses as a management competency which was not being taught in the other two universities.

### **Health Science information resources and services**

From the study two universities taught courses on information needs of health workers, information resources in health sciences and related fields and their relevance to specific information needs and methods of information delivery and access, public relations, marketing and advertising services, oral and written communication and interpersonal relations as health science information resource and services competency.

### **Health Sciences resources management**

Two universities taught courses in health science resources management. Specific courses taught included knowledge and evaluation of content and format of resources, information resource and collection management, selection, acquisition and control of resources, creation and management of metadata and information access tools, cataloguing and classification theory and indexing, abstracting, classification and taxonomy system, publishing industry and resource vendors, information formatting, production, packaging and dissemination and copyright ,licensing ,privacy, and intellectual property issues. However, one university taught bibliometric techniques while the other university concentrated on conservation, preservation, and archiving of print and digital resources, including institution repositories. Whereas the third university did not teach any of these course.

### **Information System and Technology**

The three universities taught courses in information systems and technology. The specific courses taught were; principles of automated systems including computer hardware and software, record and file construction, database and website management systems, information retrieval and knowledge organization, communication and information infrastructure, including the Internet and Web and technological solutions for permanent access to electronic information. However, one university taught systems analysis techniques, including design and evaluation with Information Technology as a specialization.

A look through the contents of the Health Science courses indicated shallow coverage of the subjects in some areas, that is, the courses taught were not adequate to impart skills that would enable health librarians to be effective and efficient in service delivery. This shows that a lot needs to be done in reviewing specialist courses being taught by LIS schools in Kenya.

**Objective II:** To establish competencies and skills required by health librarians in Kenya today.

This objective was addressed to respondents working in health organizations. The purpose was to find out the competencies and skills that they considered crucial in the management and service delivery in health information provision. The MLA instrument was used as a guide to collect the data. The following were the findings:

#### **Health Science environment competency**

The study sought to find out if the above competency was required in the management and service delivery in health organizations. Most of the respondents (60%) rated knowledge of the health science discipline as very important and 40% as important. 80% of the respondents rated the ethical, copyright and other legal issues and major programme and policy sources to be very important competencies.

Overall, competencies in Health Science environment were rated by 52% of the respondents as very important, 24% as important and 12% as not important. 12% of the respondents gave no response. This indicates that the health science environment was considered by 76% of the respondents as important competency in the management and delivery of information services in health organizations.

#### **Management and leadership competency**

From the study, strategic management, finance and budgeting were rated by 60% of respondents as very important and 40% as important. 80% of the respondents rated the decision-making strategies, prioritization, and allocation of resources, public relations, marketing, and advertising services, oral or written communication and interpersonal relations as very important. 60% rated human resource management to be important and 20% very important. Fund raising, proposal writing and reporting competencies were rated as very important and important by 40%. The findings showed that the strategic management, finance and budgeting, decision-making strategies, prioritization, and allocation of resources, public relations, marketing, and advertising services, oral or written communication and interpersonal relations, human resource management, fund raising, proposal writing and reporting were rated important management competencies in health information management.

Overall management competencies were rated by 62% of the respondents as very important, 27% important. However, there were 11% non responses. This indicates that the management and leadership competency was viewed by majority of the respondents (87%) as very important competencies in health information management.

### **Health Science information resource and services**

Majority (80%) of the respondents rated knowledge of information resources in the health sciences and related fields and their relevance to specific information needs to be very important and 20% as important. All respondents rated the information needs of health workers, methods of information delivery and access, development and/or implementation of services and information resources in the health sciences and related fields, and health science information resource services to be important.

Overall, health science information resources and services competencies were rated by 80% of the universities to be very important and 20% important. This indicates that the health science information, resources and services were rated by 100% of the universities as an important competency.

### **Health Science information resources management**

From the study responses on relevance of Health Science information resource management competencies were sought from the respondents. All the respondents rated the metadata indexing resource description and access, information resource and collection management, selection, acquisition and control of resources and information formatting, production, packaging and dissemination to be very important competency. However 80% rated the knowledge and evaluation of content and format of resources, communication and interpersonal skills, creation and management of metadata and information access tools, cataloguing and classification theory and indexing, abstracting, classification and taxonomy system, conservation, preservation, and archiving of print and digital resources, including institution repositories and interfacing. Competencies in information resources management, electronic health care and personal health records and other clinical and research data sets management were rated as important. 60% rated the copyright, licensing, privacy and intellectual issues property to be important (20%) competencies. At least 40% rated the bibliometric techniques and scholarly communication issues, publishing industry and resource vendors to be very important (60%).

Generally, all the Health Sciences resources management competencies such as metadata indexing, resource description and access, information resource and collection management, selection, acquisition and control of resources and information formatting, production, packaging and dissemination was rated as important. Knowledge and evaluation of content and format of resources, communication and interpersonal skills, creation and management of metadata and information access tools was also rated as important. The cataloguing and classification theory and indexing, abstracting, classification and taxonomy system, conservation, preservation, and archiving of print and digital resources, including institution repositories and interfacing information resources, electronic health care and personal health records and other clinical and research data sets as important competencies. The respondents rated the copyright, licensing, privacy and intellectual property issues, bibliometric techniques, scholarly communication issues, and publishing industry and resource vendors to be important competencies.

Overall, Health Sciences resources management competencies were rated by 76% of the respondents as very important, 21% as important and 3% as not important. This indicates that the health sciences resources management was rated by 97% of the respondents as an important competency.

### **Information system and technology competency**

From the study responses on Information system and technology competency was sought. All the respondents (100%) rated the information retrieval and knowledge organization and information applications in emerging areas of biomedicine, computational biology and health information to be very important competencies. 80% of the respondents rated the record and file construction and technological solutions for permanent access to electronic information to be very important competencies in information system and technology and only 20% rated as important. 60% rated the principles of automated systems including computer hardware and software, acquisition, use, and evaluation of information technologies, systems analysis techniques, including design and evaluation and communication and information infrastructure, including the Internet and Electronic health care system and records and integration of systems and technologies into the long-term information management needs and plans of the institution to be very important competencies.

Overall, information system and technology competencies were rated by 54% of the universities to be very important, 34% important, 6% not important. 6% did not give any response. This indicates that the information system and technology competencies were rated by 88% of the respondents as important competencies.

### **Research analysis and interpretation competency**

From the findings it showed that most of the respondents (60%) rated research design and methodology, data interpretation and analysis, knowledge of quantitative and qualitative methodologies and statistical techniques and their interpretation to be very important competencies for research analysis and interpretation in health care and 20% as important. 60% rated the knowledge in statistical research methods as important and 20% very important. This indicates that competencies in research analysis and interpretation were rated as important in health care information management.

Overall, research analysis and interpretation competencies were rated by 50% of the respondents as very important, 27% important and 23% not important. This indicates that the research analysis and interpretation competency was rated by 77% of the respondents as important.

**Table 1: Frequency of competencies required by health librarians**

Overall Competency	Very important		Important		Neutral		Not Important	
	Freq	%	Freq	%	Freq	%	Freq	%
Knowledge of health Science environment	15	52	4	24	2	12	2	12
Management skills	28	62	13	27	4	11	-	-
Health science information resources and services	19	80	1	20	-	-	-	-
Health Sciences Resource Management	53	76	15	21	1	3	-	-
Information system and technology	42	54	21	34	3	6	3	6
Research analysis and Interpretation	15	50	8	27	-	-	7	23

From table I above, Health Science environment was rated 76%, management skills rated 89%, health science information systems and resources rated 100% important competencies. The health sciences resources management was rated by 97%, information system and technology 88% and research analysis and interpretation competencies were rated by 77% of the respondents as important.

### Conclusion

It is important to note here that health librarians and other information specialists working in health organizations have a great role to play. They impact directly on patient care, health outcomes and clinical decision making. They also support the education and practice of health care professionals and students. Therefore specialist skills are extremely important for them to support and make effective contribution to evidence-based health care. Consequently, there training should be precise for skills and knowledge that will help them perform their roles effectively. It is also important for them to stay relevant; re-assess the current health environment and adapt accordingly. Health librarians in developing countries are called upon to seek continuing professional development opportunities in order to gain essential skills to be able to efficiently and effectively support health care in these countries.

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### References

- Lawton, A. & Burns J. (2014). A review of competencies needed for health librarians – a comparison of Irish and international practice. *Health information and Libraries Journal*, 1-11
- Anderson, R. K. (1989). Reinventing the medical librarian. *Bulletin of the Medical Library Association*, 77, 323-331

- Buttler, L. and Du Mont, R. (1996). Library and information science competencies revisited. *Journal of Education for Library and Information Science*, 37 (1), 44-62.
- Cheng, Grace (2001). The shifting information landscape: reinventing the wheel or a new frontier for librarians. *New Library world*, 102(1/2), pp. 26-33
- Cleveland, A.D. (2011). Miles to go before we sleep: education, technology, and the changing paradigms in health information. *Journal of Medical Library Association*, 99(1): 61–9
- Gorman, G.E. & Corbitt, B.J. (2002). Core competencies in information management education. *New Library world*, 103 (1182), 436-45
- Goulding, A. et.al. (1999). Supply and demand: the workforce needs of library and information services and personal qualities of new professionals. *Journal of Librarianship and Information Science*, 31(212), 1-13
- Kane, Laura T. (2011). *Working in virtual stacks: the new library and information science*. Chicago: ALA Edition
- Medical Library Association (MLA). 2014. *Competencies for lifelong learning and professional .success*, <http://www.mlanet.org/edication/policy>
- Medical Library Association (MLA) Website Accessed on 25 May 2015 from: <https://www.mlanet.org/>
- Milne, Patricia (2000). Information Professionals and the Knowledge-Aware, Intelligent organization: Skills for the Future. *The Australian Library Journal*, 49 (2), 139-150.
- Moi University website (2015). Accessed on 28<sup>th</sup> May 2015 from: [www.mu.ac.ke](http://www.mu.ac.ke)
- Odini, Cephas (1999). Training and development of skills in a changing information environment. *Library management*, 20 (2), pp. 100-104
- Rehman, S. Ur (2008). Analyzing corporate job market for developing information and knowledge professionals: the case of a developing nation. *Malaysian Journal of Library and Information Science*, 13(1), 45-58
- Sen, B., Villa, R. and Chapman, E. (2014). The roles, skills, training needs and contributions of health library and information professionals. *Journal of the European Association for Health Information and Libraries*, 10(2), 11-14
- Special Library Association (SLA), (2003). *Competencies for special librarians of the 21st Century: a report submitted to the SLA Board of Directors by the Special Committee on Competencies for Special Librarians*. Retrieved on 25<sup>th</sup> May 2015 from: [www.sla.org/content/SLA/professional/meaning/competency](http://www.sla.org/content/SLA/professional/meaning/competency)
- Ullah, M. and Anwar, M.A.(2012). Developing competencies for medical librarians in Pakistan. *Health Information and Libraries Journal*, 30, pp. 59-71