



## FACTORS TO CONSIDER IN FORMULATING LIBRARY AND INFORMATION SCIENCE CURRICULUM FOR THE 21<sup>ST</sup> CENTURY

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### Abstract

The purpose of Library and information science education is to educate individuals for careers as librarians and information specialists to undertake instruction, research and service programs that will assist them meet up with current and emerging library and information technology needs. This paper discussed factors to consider in library schools while formulating Library and information science curriculum in the 21<sup>st</sup> century. The study found out that staff, instructional technology, open distance education, choice base, need based curriculum and need for national and international accreditation agency are some of the factors to consider in order to meet up with the current trend in the 21<sup>st</sup> century and job market. The paper also found out some of that inadequate infrastructure, / instructional facilities, lack of information and communication technology skills and outdated library and information science curriculum are some of the challenges facing library and information science will continue to have problem in the digital era, these challenges can only be met if educators, library and information professionals work together and bring improvement through the curriculum with a great impact on work places. The paper recommends that adequate infrastructure and facilities, library and information staff should be trained and retrained on how to use information and communication technology facilities, and the library and information science curriculum should be updated regularly in order to meet up with the current trend in the profession and job market.

**Keywords:** Factors, Formulating, Library and Information Science Curriculum

### Introduction

The previous few decades have brought about revolutionary changes in information management activities as a result of developments in information and communication technologies, such changes request new roles for library and information science professionals. Information technology is a modern science of assembling, enhancing, processing and communicating desired types of information in a specific environment. In the present system of education, information technology is used for communication between student and teacher in which diverse technology communication devices like the computer, internet and laptops are being used to create variety of learning environments.

New trends and technologies have become crucial resources in the field of Library and Information Science and have started reforming the method of teaching and learning. Classrooms have changed from the days of chalk and now to overhead projectors and

multimedia presentation techniques. The teachers in Library and Information Science has to be trained to handle information technology and to manage it effectively in the teaching and learning system because the introduction and growth of Information and communication technology in education depend of the quality and ability of the teachers handling the education system.

**Library and Information Science Education**  
Library and Information Science curriculum and education is changing to keep up to date with changes in information profession and meet the emerging needs of job market. The major challenge of LIS education and training is how to sustain and make LIS education relevant and effective. Curriculum review and content is core to adopt and adapt coming changes hence library schools worldwide keep reviewing and designing their programs. New technologies provide information to the users in both hard and softcopy anytime, in most LIS



Jimada, A., Goshie, R. W. and Sambo, S.

schools education has been conceptualized and repositioned to provide graduates with appropriate attributes to develop and maintain high professional practice of the 21<sup>st</sup> century. Information technology has influenced and changed LIS curriculum, introduction of new LIS courses and new ways to organize library education. New technology competencies and skills required for LIS professionals have impact on LIS education system, increase in technological programs such as database, web design, digital libraries, computer programming, networking and server management.

Wilson (2011) observed that changes are brought in the LIS profession by ICTs, these can be the natural evolutionary change and the transformatory changes. In the natural evolution the library and information science profession has harnessed ICTs to do old tasks better through the automation of housekeeping tasks such as reference work, bibliographic services, cataloguing, serials, circulation and acquisition, which are done more efficiently in an ICT environment. Transformatory changes on the other hand include the advent of new roles arising out of an expanded request "driven information society wider and / or interdisciplinary jurisdiction and closer focus on user need. These transformative trends represent systematic changes that substantially alter the boundaries of the profession. For example, Fourie and Botham (2006) observed the increased use of the World Wide Web in private, social business lives of many people and hence noted that it is a vital component of the enabling structure for school, university, career and other use for information and communication. This one platform exhibits the fact that those involved in information services need to be sufficiently prepared to handle both the users of information and the attendant technologies.

Some libraries consider (LIS) as a terminological variation intended to emphasize the scientific and technical foundations of the subject and its relationship with information science. Library and information science can be seen as a combination of the two fields library and information science which at one-point separate. Muthu (2015) observed that library

and information science have witness not only increasing globalization of higher education but also that of library and information science work place including the consequent extension of competition beyond traditional, institutional, national and regional boundaries.

Library philosophy has been contrasted with library science as the study of the aims and justifications of librarianship as opposed to the development and refinement of techniques. Sing (n.d) said librarians are vital and they serve as a consultant instructor, navigator, searcher, he said library and information science cannot be vital without effective preparation of new generation of librarians to effectively use the new information and communication technology in the professional practice. Sirje (2012) stated that library and information science is inherently multidisciplinary, knowledgeable and experience from other disciplines such as computer and sociology are needed to provide quality library and information science education. The best innovation happens when two people from different disciplines are put together to work, effective and efficient collaboration in library and information science can be realize through working with vital stakeholders,

Manir (2011) stated that that the situation of information and communication technology in library and information school education (LIS) in Nigeria entails the prevailing staff, students, and library and information science schools in the construction of effective curriculum that will provide effective competencies in rendering services. Library and information science schools are still face with the challenges in trying to provide suitable and sustainable solutions to improving curriculum and skills that will support development.

Wilson (2011) said that many library educations have been enticed by the lure of modern communication technology and to concentrate on that technology and to dismiss areas of librarianship that do not fit within these technological boundaries. The lure of modern communication technology has taken a large role in LIS education. This assertion is been confirmed in the statement of Minishi Majanja, (2007) looking at the Sub-Saharan, that the LIS



Jimada, A., Goshie, R. W. and Sambo, S.

school's curriculum development has shown considerable strides in infusing ICT competence as most LIS schools have developed relevant ICT modules and / or merged relevant ICT knowledge in traditional modules. However, most LIS schools teach these modules theoretically because they have inadequate quantities and quality of computers and poor Internet access.

A curriculum is a fundamental part of any education or training programs largely because it provides not only a list of courses or modules offered in a programme, but it also gives information on content, purpose, method, time / duration, trainers and location or situation of a programme or course all of which are essential in a successful dispensation of manpower training and education (Ocholla, 2000). Library and Information Science (LIS) as a profession, is concerned with the knowledge and skill by which the records of human communication are collected, organized and utilized. A librarian is a mediator between man and the graphic records that his previous generations have produced; and the goal of the librarian is to maximize the social utility of these records for the benefit of humanity

#### **Objectives of Library and Information Science Education:**

- To enable students to understand and appreciate the function and purpose of the library.
- To equip the products in new specialized knowledge and capabilities.
- To equip them with information and communication technology skills.
- To educate and equip them the laws guiding library and information science profession.

#### **Purpose of Library and Information Science Education**

The mission of Library and information science program is to educate individuals for careers as librarians and information specialists to undertake instruction, research and service programs that will meet current and emerging library and information technology needs (University of Manoa).

#### **21<sup>ST</sup> Century Curriculum**

The 21<sup>st</sup> century skill in the curriculum is not only beneficial to students and teachers, but also necessary to prepare our youth for their future careers, in an age of education where standardized tests determine the success of our schools. It is vital to allow students the creativity and use the power of technology to support necessary skills and learn in unique ways. By allowing creativity thinking and gauging understanding of content standards through a portfolio-based system, students can display their concept retention while producing tangible and valuable outcomes. Halah and Patrick (2015) affirmed that the future of our students depends on flexibility and resourcefulness not teaching to the test, education needs to make an instructional shift in order to ensure our students succeed as innovators of the future. Teachers should also give students the opportunities to engage in various activities that promote cooperative learning such as projects, problems, design and research-based learning, in this situation students work together in order to complete the class assignment while increasing their participation, achievement and motivation to learn.

The common core state standard initiative and partnership of 21<sup>st</sup> century (2010) advocated integrating core academic knowledge, critical thinking and skills in teaching and learning to help students succeed in their future careers by supporting 21<sup>st</sup> century learning systems to improve outcomes. Additionally, the curriculum should be designed in a way that allow students to master knowledge and understand core academic disciplinary knowledge and also give them the opportunity to learn and develop various literacies such as civic, financial, environmental, health and global awareness.

#### **Issues to Consider in formulating Library and Information Science Curriculum in the 21<sup>ST</sup> Century are as:**

##### **1. Adoption of Choice Credit System**

It is necessary to consider the credit system when while formulating the 21<sup>st</sup> century curriculum, the credit system in higher



Jimada, A., Goshie, R. W. and Sambo, S.

education is define as a number of credits both core and elective required by a student for graduation or completion of a particular course/program in a given duration. This include classroom teaching, teaching, tutorial and practical field study, project/dissertation, seminar and colloquium. Institutions are expected to evolve appropriate pedagogical processes for effective transaction of instructional materials. The choice-based credit system allows flexibility to students to choose courses from other departments which will enable them to bridge the gaps and deficiencies which they may have in mind to meet before graduation. All these are carried out in order to determine proficiency of the students and duration to complete a program, the knowledge acquired from courses outside the department will also allow them to become expertise in their field together with experience and knowledge gotten from another discipline.

## 2. Internationalization of LIS Education

Internationalization of LIS education needs to be considered when formulating a LIS curriculum for the 21<sup>st</sup> century, changes at work place in a digital / virtual environment have compelled library and informational professionals to orient themselves and compete in the global market. This has necessitated a radical change in LIS curriculum and syllabus keeping in view the need of information work force required in the international /global market. This will eliminate the wide disparities of library and information science education practice between the developing and developed countries, the goal of these are to facilitate mobility of students and to increase employability. An emphasis on quality assistance on library and information science education internationally could give the opportunity for improving the skills of individual students and to increase the quality of national library and information science higher education system. Measuring courses in terms of credits, credit transfer, choice-based credit system is some of the measures to contribute to internationalization of higher education.

## 3. Need Based Curriculum

There is need to develop an up to date curricula integrating professional knowledge, skills, such as (managerial, technological, communication) and specializations to enable the students compete in both national and international potential job market.

## 4. Faculty/Staff

The qualification of staff, skills, competencies and commitment of the available staff or those to be employed matters a lot when formulating a LIS curricula for the 21<sup>st</sup> century because they play a very vital role regardless of their categories in capacity building , creativity, innovations, transfer of knowledge and capacity to use high technology for teaching and learning processes. Employing staff that are experienced and competent would allow both the staff and students to be expose to the latest trends and the development of the changing environment.

## 5. Instructional Technology Support

The instructional technology needs to be considered in formulating LIS curriculum in the 21<sup>st</sup> century because the present-day information science discipline incorporates a variety of software requirements to teach courses like library automation, networking, internet technology, multimedia digitization, content development and other areas of information management both print, electronic and web based information resources supplement the teaching curriculum, students, faculty members and researchers( Rath 2017). There is need to consider it so as to enable the educators keep themselves abreast with the latest e-books and e-journals available in the subject and also learning through website this could provide unlimited access this will enable them know the latest electronic information in the different courses and also how to use the instructional technology to teach the categories of users with wide varieties and at less cost.

## 7. Research

It involves providing answers to problems and therefore with innovative, original and scientific research in library and information science not only increases the quality of



Jimada, A., Goshie, R. W. and Sambo, S.

services but solve the practical problems of library and information profession. The emerging areas of research in an electronic and digital environment have posed serious challenges to library and information profession paving a way to entirely transform and meet the challenges. Therefore, consideration should be given to it so as to enable the information professionals know the various areas that are trending in LIS education and for them to advise and educate their students to pick their research interest from such area so as to meet up with the global trend and job market. They can even decide to carry out a community project from some of the areas. More research fellowship, grants needs to be awarded by bodies responsible for accrediting higher institutions of learning to enable researchers, students and teachers to engage in different areas of research and find a lasting solution to challenges in the field of Library and information science.

#### 8. Open and Distance Education

This is the online mode of learning for some who choose that method because of some reasons, some modules based of courses are developed for them which they use in learning and to access the modules they must have access to a laptop and internet connectivity. It has been opined by many experts that library and information science through distance mode by open universities are engaged in over production of library and information science graduates, postgraduate and diluting the quality of both the course and the products. There is the need to streamline proliferation of such courses through distance mode. Norms, standards and guidelines developed for distance learning should be followed.

#### 9 Need for National and International Accreditation Agency

For quality assurance and maintenance of standards there is need for accreditation body to achieve standards of excellence at national level, the accreditation body will ensure adopting best standards and guidelines for schools of library and information science in regard to the national and international standard. This will follow the library and

information science degree holders of one country to be accredited by another country, though this is happening in some countries

#### Challenges

1. Inadequate Infrastructure/instructional facilities such as the internet, network, Wi-Fi, computers, interactive board for teaching, learning, research, and for the students to lay their hands on for practical before graduation. Even in schools where there are such facilities you will find out that they are inadequate and some don't even have a dedicated structure for it. Classrooms, digital libraries, computer laboratories, and offices are inadequate.
2. Lack of Information and communication technology skills by some LIS staff and students.
3. Inadequate funding: some library schools are constrained by poor funding to acquire, run and maintain some facilities with and as long as the funding does not improve the problems will still remain
4. Unreliable power supply: It is a problem because the cost of generating electric power by institution is high and difficult for them to cope it and this makes it difficult to use the ICT facilities which are also electricity driven and that means that without light it cannot be used for instruction.
5. Inadequate and expertise staff to teach ICT related courses
6. Out dated and no standard LIS curriculum to meet the 21<sup>st</sup> century demand.
7. Changing nature of ICT: The changing nature of information and communication technology pose a problem on existing facilities and staff development
8. Inadequate training for both the students and staff on the use of ICT.
9. Job market vs curriculum change; there is a gap between competencies that LIS education provides and those required by the job market today

#### Conclusion

Schools of library and information science will continue to have problem of digital era and these can only be met when the educators,



Jimada, A., Goshie, R. W. and Sambo, S. researchers, library and information science professionals work together and bring improvement through the curriculum which has great impact on work places. The library and information science is not only aim at balancing traditional practice of librarianship and technology but to do a lot to make students expose and develop in different areas of information and communication technology and its application in library schools, information centers and the libraries. Library and information schools should revamp library and information science education in the world and draw a road map to achieve its mission

### Recommendations

1. Adequate classrooms, digital library staff offices, computer laboratory should be built so that students and staff that do not have a permanent or dedicated structure for themselves will have one and those that have but not adequate it will be increased, network, internet, computers, Wi-Fi and interactive board should be provided and use to support teaching, learning and research.
2. Teachers in LIS schools and their students should be trained on the various ICT skills and how to use it to search for e-resources, e-journals, how to use it for conducting exams and test and also how to use the interactive board for teaching in order to meet the up with the current trends.
3. Adequate fund should be provided to the school of library and information science to acquire current ICT facilities, fix the bad ones and for proper maintenance of the ICT facilities and other things needed.
4. Standby generators, inverters and solar systems should be provided to be able to use the instructional facilities constantly for teaching so as to meet the up with the current trend in technology.
5. Adequate, expertise and competent information professionals' school of LIS should be employed to teach courses related to ICT such as networking, digital curation, digital preservation and information technology so as to meet up with the global trend and job market.
6. LIS curriculum should be, reviewed, updated regularly and should include more courses

on ICT in order to meet up with current trend in the profession and job market.

7. An adopted global standard of curriculum should be introduced and made available to all schools of library and information science.
8. Existing ICT facilities in schools of library and information science should be up graded constantly to the latest technology.
9. Information professionals' teaching and handling students in schools of library and information science should be re- trained in handling theory and practice of information technologies if they are to meet with the demand of labor market.
10. Students of LIS should be thought courses that are related to the current trends in the profession so that they will be able to meet up with the demand of job market.

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