

ICT COMPONENTS IN THE CURRICULUM OF MASTER'S PROGRAMME IN LIBRARY AND INFORMATION SCIENCE AMONG WOMEN'S UNIVERSITIES IN INDIA

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The main purpose of the study is to assess and compare the Information and Communication Technology (ICT) components in the master's programme of Library and Information Science (LIS) among Indian women's universities. The development in information technologies necessitates LIS professions to have ICT competencies and management skills to manage information services. There are needed to compare ICT components in LIS program. The study has been conducted through content analysis of ICT components in the curriculum of Master's programme in LIS. Required pertinent information was consolidated from the universities websites. The major findings of the current study are: all women's universities have different MLIS program structure like intake of student, nomenclature, course structure, credits, and schemes of papers. There should be uniformity in MLIS program. The universities offer similar ICT courses with different nomenclature for courses. LIS curriculum should be balanced with theoretical and practically oriented in all women's universities. It should meet the national needs of libraries. The UGC Model Curriculum 2001 itself is incredibly old and needs to be redesigned in accordance with technological changes and NEP 2020 to accommodate, integrate and serve the emerging trends and management aspects. This study would benefit women's universities to find gaps in ICT Components in the curriculum of master's programme of Library and Information Science, policymakers, and to redesign the curriculum.

Keywords: Information Communication Technology; ICT; Information Technology; Curriculum; LIS education.

INTRODUCTION

The curriculum is designed to prepare the students to obtain a desirable knowledge about the areas and acquire skills relevant in the field (Karisiddappa and Asundi, 2006). The main purpose of the curriculum is to impart knowledge and skills to students. According to Chu, "a curriculum of LIS education usually mirrors what is being offered to train librarians and information professionals who will not only acquire the essential

knowledge and skills to become qualified personnel in the field but also meet challenges the ever-changing information society brings (Chu, 2006). In the internet era and fast-changing technology, ICT has become an integral part of the LIS curriculum. ICT has emerged as a major tool for teaching and learning through its potential as a source of knowledge, a medium to transmit content, a means of interaction and dialogue. The developments in information technologies dictate that the LIS professions must have ICT competencies and management skills to manage information services. It is essential to equip the professionals and provide them with a state of art eco-system where they can perform according to the need of time, and hence the responsibility of departments and curriculum developers is significant. The curriculum must be flexible to match the disciplines dimensions. Hence an attempt is made here to map the ICT components in the women's Universities in India.

REVIEW OF LITERATURE

Extensive literature is available in reference to ICT components in LIS curriculum. The literature reveals that there is a great deal of attention being paid to the development of LIS programs by integrating ICT courses into the curriculum to improve learning outcomes and to enhance LIS graduates' technological skills. Karisiddappa (2004) deliberated that the LIS education scenario in the developing countries calls for a model curriculum to develop ICT skills and competence in the work place. Karisiddappa and Asundi (2006), highlighted the IT impact on the LIS curriculum structure of the professional

course. They propose redesigning integrated curriculum models for traditional LIS education. The traditional subject should be given a new facelift in the changing role, and the professionals should understand them.

Singh and Shahid (2010) explained that LIS curriculum required constant monitoring and a statutory body like ALA to accredit programs according to an international standard. Kumbhar and Tadasad, (2019), observed that Universities in the state of Karnataka have included ICT components in their LIS curriculum, but each university differs in ICT components in teaching and learning. Similarly, Sethurvelmurugan (2011), suggested LIS education and curriculum need to upgrade with ICT applications to enhance technical skills among students, which are essential of the digital era.

Suresha and Narayanaswamy (2017), highlights inadequacy of infrastructural facilities and ICT affected qualitative teaching, learning and research. Gaikwad, (2017), presents the scenario of LIS education in Maharashtra and recommended to redesign the LIS syllabus to better services in the light of UGC Model Curriculum for an integrated two-year LIS course and incorporate ICT into their curriculum at all levels with theory as well as practical. Ramesh and Ramesh Babu, (2007), expounded the challenges of the technological revolution in LIS education in India and suggested ways to make it more relevant and effective. It is proposed to groom students with knowledge and training for librarians. Eqbal, Nadeem & Mohd (2010), traced the development of LIS professional education

in India. Emphasized the need for a national accreditation body to maintain LIS education uniformity and standards. Similarly Sanghamitra (2014), analysed 33 universities throughout the country. The document advocates the establishment of a national LIS education accreditation council to maintain the quality and standard of LIS courses. Wijetunge (2009), carried out a comprehensive analysis of the LIS education system from 2004- 2007 at Sri Lanka. Most members do not have curriculum design training, and the team lacks inputs from other stakeholders, apart from LIS experts. Ganaie (2012), investigated the course structure in the LIS schools in North India at graduate level. Analysis shows that there is a gap in the curriculum adopted by these schools. Peter and Mini Devi, (2018), studied heterogeneity and homogeneity in the curriculum and adoption of ICT in the LIS curriculum in Universities of Kerala at post graduate level. The study found that there are 3 institutions (75%) that conduct a 2-year integrated MLISc program whereas one department, M. G. University, conducts one-year BLISc and one –year MLISc programs. The number of papers in the curriculum of these departments varies. From a theoretical and practical point of view, all departments covered ICT and the application of ICT in the library field. Kumar & Kumar, (2006), outlines of the impact, transformation, implication of ICT in teaching and learning in LIS education. Curriculum development should focus on skills that are essentials for LIS professionals. Singh, (2018), discussed the evolution of LIS curriculum, efforts to revise LIS curriculum and course content in UGC Model Curriculum.

The review of literature clearly indicates how different universities have incorporated ICT components. And at the same time there is a necessity to know how Women's universities – established exclusively to promote higher education among Women have addressed this issue which has not been addressed in the studies reported so far. Hence this study concentrates on inclusion of ICT components in the LIS curriculum of Women's Universities in India.

OBJECTIVES OF THE STUDY

The main objectives of the study are:

1. To compare ICT components in the curriculum of master's programme Library and Information Science in Indian women's universities.
2. To evaluate the level of compliance with the UGC model curriculum 2001.
3. To make suggestions for LIS curriculum development.

METHODOLOGY

This study compares ICT components in the curriculum of master's programme Library and Information Science in Indian women's universities. The present study has been carried out through content analysis and evaluation of ICT components in the curriculum of master's programmes LIS. The required data is gathered through the universities websites. A review of literature has been presented on published literature such as books, journals, library portals, important Websites, and other valuable virtual sources. Curriculum contents and other pertinent information were consolidated from the respective Website of the Universities.

CHARACTERISTICS OF STUDY POPULATION

As per UGC consolidated list of universities there are 12 universities exclusively meant for women's higher education in India as on 8th August, 2021 (UGC, 2021). Out of these, 4 universities offer LIS programmes. Required data has been elicited from the respective university's website.

The Shreemati Nathibai Damodar Thackersey Women's University established in 1916, known as SNDT Women's University Mumbai is the first Women's university in India and South-East Asia. 'Shri. HansrajPragji Thackersey school of Library Science' popularly known as 'S.H.P.T. school of Library Science' was established in 1961 is now completing 60 years and the oldest department among women's universities in India to offer programmes in LIS. The department offers MLISc and Ph.D. programs in Library and Information Science. The MLISc curriculum was revised in the year 2017.

Mother Teresa Women's University (MTWU), Kodaikanal was established in 1984. The Department of Library and Information Science was set up in the year 2008. The programmes offered by the department are M.Lib.I.Sc two-year CBCS programme, and PhD Research programme. The curriculum was revised in the year 2018. Karnataka State Akkamahadevi Women's University was founded in 2003 in the city of Vijayapura. The Department of Library and Information Science was established in 2007 had completed 14 years. At present university offers C.Lib.Sc, MLISc, M.Phil and Ph.D. In the year

2018 the MLISc curriculum was revised. The Assam Women's University, (AWU) Jorhat is the first Women's University in the entire North-East India established in 2014. The Department of Library and Information Science was established in the year 2015, under the School of Engineering and Technology. The department offers two years of the master programme. In the year 2019 the MLISc curriculum was revised. It is very clear from the above analysis that there is one department which has completed 60 years of existence in a metropolitan city, one in the developing north-eastern region which is still in its infancy and two departments which have been set up almost in the same period are in their teens.

DATA ANALYSIS AND INTERPRETATION

Program Details

The Table 1 shows MLISc programme details of Indian women's universities. The required course eligibility is any bachelor's/graduate degree from a recognized university for all the women's universities. All women's universities offer 2 years program spread over 4 semesters. The nomenclature of the degree is different from one university to another. In AWU it is M.L.I.S., for MTWU it is M.Lib.I.Sc, and its nomenclature is MLISc for KSAWU and SNDTWU.

The intake also differs from one university to another. The intake 30 + 10 (enhanced fees) in KSAWU which is highest among women's universities. MTWU has the lowest intake with 20, while SNDTU admits 25 students and AWU admits 35 students every year. All universities

under study follow CBCS pattern. The number of credits required for a student to complete the program also varies. Students have to successfully complete 80 credits in KSAWU and SNDTU where as they have to complete 80 credits at AWU and 90 credits at MTWU.

AWU offers 5 courses with 4 credits in each semester and course schemes is core, discipline specific elective, value added, open elective as per LOCF -2014 proposed by UGC.KSAWU offer 7courses in each semester with 4 credits.

KSAWU offers hard core, soft core, mandatory courses, and open electives. In each semester studying 3 hard core courses is mandatory. They also have to study 3 soft core courses among the pool of courses. This will help students to choose an interesting subject. One mandatory course is offered in first two semesters from Women’s Studies discipline. The SNDTWU offers 5 courses in each semester with 4 credits. MTWU offers theory, practical and elective courses. The SNDTWU offers mandatory papers for the MLIS course.

Table 1: MLISc Program Details of Indian Women’s Universities

Course Details	AWU	KSAWU	MTWU	SNDTWU
Course Eligibility	Any graduation	Any bachelor's degree with 50% marks in aggregate obtained from any recognized University.	Any graduation	Graduate from any faculty of this university or any other recognized university as equivalent thereto.
Student Intake	35	40	20	25
Nomenclature	M.L.I.S.	M.L.I.Sc.	M.Lib.I.Sc	M.L.I.Sc.
Nature of Course	2 Years (4 Semesters)	2 Years (4 Semesters)	2 Years (4 Semesters)	2 Years (4 Semesters)
Course Structure	CBCS	CBCS	CBCS	CBCS
Credits	80	80	90	80
Schemes of Course	Core Course, Discipline Specific Elective, Value Added, Open Elective	Hard core, Soft core, Mandatory Course, Value Added, Open Elective	Theory, Practical, Elective	Mandatory Course, Open Elective

AWU=Assam Women’s University, Jorhat, MTWU= Mother Teresa Women’s University, Kodaikanal.

KSAWU=Karnataka State Akkamahadevi Women’s University, Vijayapura,

SNDTWU= Shreemati Nathibai Damodar Thackersey Women’s University, Mumbai.

Semester wise ICT courses

The Table 2 shows semester wise ICT courses in each semester of women’s universities. AWU offers 7whereas, KSAWU added maximum 11 ICT courses in the program, MTWU offers 5 ICT

courses, and 3 courses by SNDTWU. The AWU in 1st semester offer Fundamentals of Information Communication and Technology (Core), in 2nd semester offer ICT Applications in Library and Information System, in 3rd semester offers 2

courses are Web Resources and Metrics Studies in LIS, Library Automation – Theory & Practice (Core Course) and in 4th semester includes Digital Library System – Theory and Practice (Core course), Web Technologies in Library and Information Service, Management of Electronic Resources (Discipline specific Elective course). As KSAWU offers 3 soft core course and one practical course in 1st semester, it includes Fundamentals of Information Technology, Database Management System, Electronic Commerce and one practical course is Fundamentals of Information Technology. In 2nd

semester offers Conservation and Preservation of Information. In 3rd semester offers 2 ICT course one is Library Automation and another is with hands-on session Library Automation Practical. In 4th semester offers 3 ICT courses Networks, Networking, Consortia and Internet Technology (Hard Core), Digital Libraries (Hard Core), Digital Libraries (Practical), and Content Management (Value added course). The MTWU offers ICT courses from 2nd semester it includes Library Automation and Digitization (Theory) and E-Publishing (Elective). In 3rd semester offers 3 Digital Libraries (Theory), Web Technologies

Table 2: Semester wise ICT courses

ICT Papers	AWU	KSAWU	MTWU	SNDTWU
1stSem.	Fundamentals of Information Communication and Technology (Core)	1. Fundamentals of Information Technology (Soft Core) 2. Database Management System (Soft Core) 3. Electronic Commerce (Soft Core) 4. Fundamentals of Information Technology (Practical)	NA	NA
2ndSem.	ICT Applications in Library and Information System	Conservation and Preservation of Information (Soft Core)	1. Library Automation and Digitization (Theory) 2. E-Publishing (Elective)	1. Information & Communication Technologies (Mandatory course & Theory)
3rdSem.	1. Web Resources and Metrics Studies in LIS 2. Library Automation – Theory & Practice (Core Course)	1. Library Automation (Hard Core) 2. Library Automation Practical	1. Digital Libraries (Theory), 2. Web Technologies (Elective) 3. Application of ICT Practice (Automation, Repositories, CMS) (Practical)	1. Digital Librarianship (Mandatory course & Theory) 2. ICTs & Digital Librarianship (Practical)
4thSem	1. Digital Library System – Theory and Practice (Core course) 2. Web Technologies in Library and Information Service (Discipline specific Elective course) or 3. Management of Electronic Resources	1. Networks, Networking, Consortia and Internet Technology (Hard Core) 2. Digital Libraries (Hard Core) 3. Digital Libraries (Practical) 4. Content Management (Value added course)	NA	

(Elective), Application of ICT Practice (Automation, Repositories, CMS) (Practical). The SNDTWU also started offering ICT course from the 2nd semester it includes Information & Communication Technologies (Mandatory course & Theory) and in 3rd semester projected Digital Librarianship (Mandatory course & Theory) and ICTs & Digital Librarianship (Practical). It is observed that each university are offering different ICT courses in each semester.

ICT Components as per UGC Model 2001

To identify the ICT components referred to in the UGC Model Curriculum Report, 2001. ICT components in Master’s level Library and Information Science curriculum can be categorized into the following categories:

- Information Technology: Basics
- Information Technology: Advance
- Applications of ICT in Library and Information Science: Digital Library, Library

Automation, Information storage, search and retrieval, etc.

It has described one module for Information Technology in two years Master’s Level curriculum of LIS. The report was taken as reference and further in accordance with current trends, the ICT components content theory and practical have been modified and identified in table no 3 as below:

Table 3: Level of compliance Identification of ICT components as per UGC Model Curriculum, 2001

ICT Component	AWU	KSAWU	MTWU	SNDTWU	Level of compliance in %
Fundamentals of IT/ICT	Y	Y	N	Y	80
Operating Systems and Programming Language	Y	Y	N	Y	80
Computer Application	Y	Y	Y	Y	100
Networking	Y	Y	N	Y	80
Internet	Y	Y	N	Y	80
Database Management System	Y	Y	N	Y	80
Library Automation	Y	Y	Y	Y	100
Digital Libraries	Y	Y	Y	Y	100
Current Trends in Information Technology	Y	Y	Y	Y	100
Information Storage and Retrieval	Y	Y	Y	Y	100

The table 3 shows that AWU, KSAWU and SNDTWU had complied with 100% of ICT components as per UGC Model Curriculum 2001

whereas MTWU has covered 50% of ICT Components.

Fundamentals of IT/ICT

ICT plays a vital role in LIS education. It brought lot of changes in the LIS profession and library services. The major change we can see traditional libraries becoming digital libraries. With the help of IT/ICT libraries enriches online services, such as cataloguing, circulation, and reference services, etc. So, LIS students must have IT knowledge to compete in the LIS job market. To meet this challenge LIS curriculum must have adequate ICT components. Table 3 shows that 80% of women's universities have added fundamentals of IT/ICT in MLIS program. In this course included basic IT, computer history, components, binary system, computer architecture, data representation in computer etc. The AWU and KSAWU proposed fundamentals of IT/ICT course in 1st semester itself and SNDT has been started in 2nd semester. The MTWU excluded IT/ICT component from the LIS program. Although the name of courses are different but find similar component in course. It is suggested that certain topics such as basics of IT/ICT, fundamentals of IT, computer architecture, and obsolete languages could be considered for deletion in specific areas.

Operating Systems and Programming Language

Technological changes have been carried out in libraries. The explosion of information, data process, transformation, and migration is challenging for LIS professionals. To address this problem operating system and programming language is essential competence. The LIS

employment market considers these competences for employment. Table 3 indicate 80% of women's universities have been compliance with the operating systems and programming language components in MLIS program. AWS, KSAWU and SNDTWU universities covered theoretical and practical aspects of operating systems and programming languages. The AWU included Operating system concepts; function of operating system; UNIX, MS-DOS, Microsoft windows; Command interpretation shell, Utility program from theoretical aspect in the course. The KSAWU covers purpose, Operating systems; MS-DOS, Microsoft Windows, UNIX, Linux and basic SQL commands. SNDTWU University covered systems software—Operating systems, interpreters, Compilers, from theoretical aspects. The MTWU have not included operating system and programming language.

Computer Applications

The LIS Professionals required computer applications skills to perform library services and activities. Vital change in digital library services such as searching databases, online services, resource sharing, networking to facilitate these services also required computer knowledge. Table 3 indicates 100% of women's universities incorporated computer applications in the course. The AWU covered application software package-word processing package, spreadsheet package library management software theoretically in the course and practical session on software packages like Microsoft Office-Microsoft Word, Power Point, Excel, and Paint. The KSAWU covered

Application software: Word processors, Spreadsheets, Presentation packages and Database Management Systems, Internet browsers, Software suites, Anti-virus programs, Sharewares, Web design tools, HTML Editors. File organization: Sequential, Indexed Sequential and Direct file. Practical session include MS-Word, MS-Excel and MS – MS Power point. The MTWU have added content management software JOOMLA and DRUPAL practical to the course. The SNDTWU added application software, Word processing, Spreadsheets, presentation tools, database management systems, antivirus Software, Open Source Software. The MTWU have added content management software practical to the curriculum.

Fundamentals of Telecommunications

In recent decades, networking has been significantly affected by library online operations and services like acquisition, cataloguing, circulation, reference services, SDI, etc. To provide online services and to transmit information available in different electronic formats requires high speed of electronic network system in libraries. The table no 3 indicate that 80% of the women's universities are compliance of Fundamentals of Telecommunications and networking component in the program. The AWU, KSAWU and SNDTWU have added fundamentals of telecommunications and networking components in ICT course. The KSAWU added extensive network components like Networks, Network topologies and types of networks, Network architecture, Comparison of different network

architectures, Network protocols, Network protection, and security, Network Media and Hardware, Types, and Topologies and Telecommunication Networks in the syllabus. The AWU and KSAWU covered library network and consortia in the course. The MTWU has not included fundamentals of telecommunications in the course.

Internet

The surge in information was found due to the Internet revolution. In a few seconds we can search N numbers of results on internet. It helps to provide online service to end-user, to allow for easy access and share information. Table 3 indicates 80% of internet components covered by AWS, KSAWU and SNDTWU universities included Internet and WWW, internet searching, metadata, and internet services, technology etc. Besides, SNDTWU added advance components like cloud computing in the course. It found that beyond the UGC model curriculum universities added current technology. The KSAWU additionally included Cyber laws, Electronic Document, Digital signatures, Digital certificates, Electronic contracts; Regulations of cyber laws, IT act 2000 and its amendments. MTWU has excluded Internet component from the course.

Database Management System (DBMS)

Database management system becomes another important aspect of the ICT component. DBMS is designed to provide an environment that is both convenient and efficient to use in retrieving information from and storing information into the database. Due to the

increasingly huge amount of information needs databases to store and retrieve information at right time. It helps to manage for defining, creating, manipulating, controlling database. Table no 3 shows 80% of universities had covered database management system component in MLIS program. The AWU, KSAWU and SNDTWU universities added theoretical aspects of the database management system in the course. The KSAWU added a detailed study of DBMS, Data Models, Entity; Relationship Model, Relational Model, SQL, Integrity constraints, Object Oriented data Model: Languages; Database System Architectures, Data conversion techniques – ISIS, ASCII, ISISMARC and MARC Edit etc. The SNDTWU added Database Management System Concept and types, Structure and File Organization, Basic function, Database development WINISIS and ISIS/MARC in the course. The AWU, KSAWU and SNDTWU practically covered creation of database using WINISIS. The KSAWU study and work experience with RDBMS: Oracle, MS-Access and WINISIS. The MTWU have excluded this component from the MLIS program.

Library Automation

Library automation is another key element of ICT in LIS education. Most libraries are fully automated and it reduces manual work Table 3 shows 100% of all women's universities included basics of library automation, applications of Barcode, RFID, etc. The AWU added basic theoretical and practical course for library automation. For practical includes latest version of Soul and Koha software, installation, database

creation and use. Furthermore, SNDTWU added Library security: CCTV, RFID, Biometric System and Electromagnetic surveillance System (ESS). KSAWU added an overview of Integrated Library Management Systems (ILMS), Study of SOUL 2.0, NIC-E-Granthalaya, Koha, and Evaluation of Library automation systems, criteria for evaluation; techniques, Study of standards. The MTWU included fundamentals of library automation, planning and digitization etc. All the universities have covered various topics in this component. Practically all women's university covered hands-on sessions like, AWU covered SOUL and KOHA software, MTWU included WINISIS, LIBSYS, KOHA, the KSAWU with any two of the library software packages: SOUL, EASYLIB, LIBSYS, New GenLib, Koha, NIC- E-Granthalaya, and the SNDT included SOUL and KOHA: Installation, Database Creation and Use. Library Automation processes using selected software, Demonstration of Open Source Software. And the SNDT covered Library Automation processes using selected software, Demonstration of Open Source Software. There is no uniformity in topic for same course.

Digital Libraries

Digital libraries have completely transformed the traditional library concept. It helps to develop institutional repositories and provides easy access electronically. Virtually all the information received at user's fingertips, they can access information via desktop or mobile. Table 3 indicates, Digital Library component covered by all the women's universities in the course. The AWS have covered digital library components with practical session included

Dspace, creating of webpage etc. The MTWU included basic, digital library services; institutional repository and practical of GSDL/Dspace. The KSAWU more emphasize practically included Greenstone/Dspace/E-Prints; Building digital collections; Creating Metadata, Searching, Indexing; modifying user interface. Besides SNDTWU added Hands-on Digitization - scanning, OCR, image management, creation of digital library using Open Source Software GSDL/Dspace. All the women's universities covered digital library components in the course with theoretical and practical aspect equally.

Information Storage and retrieval

An information retrieval system has constructed a bridge between information producers and end-user of information. Information storage and retrieval gathers and organizes information and makes available the right information to the right user. The components include OPACs, Online IRS online information retrieval systems, Online Database, Web-based information services, Web Search Engine. Table 3 indicates 100% of compliance of information storage and retrieval is included in the course by the women's universities.

Current Trends in Information Technology

Now a day's technological change is a critical task to decide current trends in IT. This has become a major task to develop the curriculum and for the students as well. Though the current trends are cloud computing, ontology's, electronic- Commerce, data analytics etc. all the universities added to the present IT trends. AWU

added webometrics, applications of 2.0. The KSAWU added Web OPAC, Subject Gateways, Library Portals, Blogs, Podcasts, RSS Feeds, IM, Wiki, etc; Artificial Intelligence and Expert Systems in Libraries, Social network, Electronic Commerce. The SNDTWU added cloud computing, mobile technology etc. The MTWU covered Mobile applications. These components enrich student competencies in ICT and they can compete in the current LIS employment market.

Overall above described components are essential for LIS professional to enhance their competencies and skills to perform library activities.

FINDINGS AND SUGGESTIONS

The study had revealed various results.

1. The present study finds that all women's universities have difference in MLIS program structure like intake of student, nomenclature, course structure, credits, and schemes of papers like hard core, soft core, mandatory, open elective. There should be uniformity in MLIS program.
2. The AWS, KSAWU, MTWU and SNDTWU offer similar ICT courses with different nomenclature of the course. There should be uniformity in the MLIS program throughout the nation.
3. The AWU, KSAWU and SNDTWU have covered 100% of ICT components in curriculum as per UGC model. The MTWU have covered 50% only.
4. The fundamentals of ICT components are included in MLIS program at AWS, KSAWU

and SNTWU. It is suggested that certain components required to exclude from the curriculum such as basics of computers, historical developments, generations and classification of computers, components etc.

5. The MS-Dos is outdated need to exclude or replace with latest WINDOWS version for the study.
6. The MTWU have excluded fundamentals of IT/ICT component from the course.
7. Considering technological changes there is a need to standardized and re-examine the curriculum. This will enriches graduate's competencies in the LIS job market.
8. The present KSAWU LIS program found balanced with a theoretical and practical aspect. The SNTWULIS program is more theoretical oriented. It is opined that the LIS curriculum should be balanced with theoretical and with practical oriented. It should be designed to fill the national needs of libraries.
9. The UGC Model Curriculum 2001 itself very old, needs to redesign according to technological changes to accommodating, incorporating, and severing the emerging trends and management aspects.

CONCLUSION

ICT change affected LIS program, market demands, information-seeking behaviour and broader perspective of information management has also expanded. Therefore, the universities need to pay more attention to their hands-on experiences and remove old ICT components like

the basics of computers. Include real-time practical oriented ICT components like chatbot, mobile applications, online services marketing etc. To have a bright future for LIS education in the country, there is a need to bring out a standard and uniformed model curriculum. So this helps LIS Professionals easily respond, adopt changes in work place.

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