Comparing ICT components in MLISc. curriculum of TU with SAARC Universities

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Abstract

The study, entitled "Comparing ICT components in MLISc. curriculum of TU with SAARC Universities," has an objective to identify the differences and similarities of MLISc., TU courses in entailing ICT contents. To obtain this objective, this study compares the ICT content of the MLISc. curriculum of TU with five universities from India, Pakistan, Sri Lanka, and Bangladesh, one from each country. Those universities were selected with reference to the higher rank recommended by website Unirank 2021. The sources of data were interpreted categorically based on syllabus content. As the result, the comparison clarified that the MLISc. curriculum of TU has incorporated similar standards of those selected universities, where fundamentals of ICT, data communication and networking, programming language, library management software, web designing, multimedia, and information retrieval courses are incorporated. In MLISc., TU courses, the content related to library management software are relatively less. However, to address the gap, Central Department of Library and Information Science, (CDLIS) TU has included a practical class on Koha, LIS from 2019. More up-to-date, comprehensive package of library automation and digitization services, from operations to system design, is the most demanding from LIS graduates, practical-based courses incorporated into LIS education would be preferable for increasing the effectiveness of ICT in LIS management.

Keywords: *ICT courses; Library automation; Library education - Curricula; Nepal*

Introduction

The initiation of Library and Information Science course in Nepal was started in 1995, that is 108 years later in compare to LIS education in USA and 50 years later in

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compare to India (History of library and information science department, 2021). It reveals the slower address to the development of LISc curriculum in Nepal. However, the favorable condition for Nepal was the time, where it had an opportunity to take the developed MLISc courses as the references before designing its own. The journey period of LISc education in developed countries, like USA, has crossed a milestone in LIS education. They are rich in course varieties and specifications. Even in the United States, a developed country, there are substantial changes in the horizons for LIS education brought forward by a new generation of tech-savvy, collaborative, and courageous professionals (Boyd, 2016). They have raised the issue of social media collaboration for the improvement of LIS education in developing countries. Similarly, over the last two decades, there has been a growing interest in internationalization in library and information science (LIS) education in Europe. However, there has been a recent expansion and intensification of collaborative initiatives; European LIS schools have begun to participate more actively in joint activities to respond to globalization challenges, to improve, innovate, and strengthen LIS curricula and courses to serve the changing needs of students and the global employment market, and to meet international quality standards in teaching, research, and services (Virkus, 2008). The course content related to ICT has drastically increased this year in North America, Europe and Asia (Liu, 2004). The importance of LIS curricula in developing countries, reliance on Western education models, a lack of respect for the profession, and the necessity to update librarians' and other information professionals' abilities to meet the challenges of the information society (Johnson, 2007). Implementation of the knowledge of information management has been practiced and tested, technological aids to boost the service (Onuohs & Obialor, 2015). Information Science education ensures sound theoretical foundations and practical studies with revolutionized concepts (Bhatt & Walia, 2016), aiming to prepare professionals who can encounter emerging political, educational, psychological, cultural, and technological challenges. Furthermore, librarianship requires flexibility, vision, and the ability to think critically while also synthesizing in order to continue learning. In regards to developing countries like India, Bangladesh, Sri-Lanka's LIS schools have focused on balancing the theory and practice of librarianship that gave weighted for manual services (Aman & Sharma, 2005). Developing countries are still continuing with LIS courses and ICT inclusion (Yunusa & Muhd, 2017). Some countries in South Asia have not started LIS education. A status report on LIS education in terms of present circumstances, librarianship qualification systems, recent changes in curricula and employment markets for certified librarians, and credit exchanges with neighboring countries. The presentations revealed eight common trends in LIS education in Asia, as well as issues specific to each country (Miwa, 2006). The slower development of information technology is one of the features of developing countries. Why has technology not moved rapidly in developing countries? Onuohs & Obialor (2015) identified the causes for slow development of technology in developing countries are: cost, lack of standards, lack of perceived market, lack of digital devices, lack of users' readiness, to move from printed materials, lack of copyright training, and lack of training using technology.

As the training was considered one of the causes for the slower adoption and development of technology, the training curriculum are worth to review. Formal education is the higher level of training. Formal education and training programs are regarded as the basic tools for education (Ocholla, 2000). It follows particular curriculum, which incorporates course content, purpose of study, method, time scheduling, etc. The accumulation of ICT course content is one of the means to adopt technology that is equally true for LIS field.

The use of ICT courses has been restructured as per the market demand, though all SAARC countries deal with almost common problems (Baradol, 2021). Within the formal educational sector, ICT tools can be used for tasks such as creativity, communication, collaboration, and task-based activities. Furthermore, according to time (Edegbo, 2011; Yunusa & Muhd, 2017), these skills are to develop the best programs, procedures, and services to handle the immediate and future job requirements by using modern techniques in the shortest possible time. Constructive and e-learning have replaced traditional methods of learning. The use of technology in teaching training programs improves the efficacy of addressing today's needs (Ratheeswari, 2018). So, the use of technology in the education field has been a compulsion.

ICT performs an important role in LIS education, which can't be ignored (Francisca, 2017; Tyagi & Yanthan, 2017). The development of new ICT and LIS education necessarily requires more than the regular updating of current curriculum content. The syllabus is not able to adequately respond to emerging concepts (Kaur, 2015) of technology. The more emphasis placed on the theory, the more problems with its application arise. Constructive and e-learning have replaced traditional methods of learning. It is a roadmap for rediscovering the LIS concept (Abdullahi & Asundi, 2014). The development of new ICT and LIS education necessarily requires more than the regular updating of current curriculum content. So, the continuous reviews on the ICT course in LIS education is needed. This paper, hence, aims to compare and contrast Nepali LIS curriculum on the availability of ICT courses in LIS curriculum with other SAARC countries LIS curriculum.

The study has compared and contrasted with MLISc. curricula in other South Asian countries. For curriculum comparison, universities in SAARC countries that offer IT courses for master's degrees in library and information science on a semester system are selected for the study. Among them, one university from each SAARC country has been chosen as per the rank. All the syllabuses were gathered through websites and prepared through checklists by covering ICT content of syllabus. Discussion is guided by the descriptive analysis method. The courses have been compared with the Nepalese MLISc. curriculum.

Method of comparison

One national university of each SAARC countries has been chosen to compare and contrast the various ICT components of MLISc. curriculum among South Asian countries.

Data has been collected from all secondary information sources, i.e., university websites. In the first phase, a simple survey of SAARC-country universities by Unirank (Unirank, 2021) was conducted to find out whether or not they had masters' degrees in library science. The university with an ICT component in its curriculum and running on a semester system was chosen. A brief profile of each university was prepared. All the required information was not available on websites; hence, the officials were requested repeatedly via personal email and phone calls. The detailed syllabus was gathered, but this study only covers the IT content. The ICT component checklist was developed. The interpretation was carried out based on this information, which is available on websites. Bloom's Taxonomic Pyramid rank has been used to identify the level of ICT course competencies in Nepal for the content analysis of current curriculum among SAARC countries.

MLISc. education in Nepal

To address the shortage of skilled labor, TU provided scholarships for personnel to further their education in library and information science courses. In the year of its establishment, 1995, the Department of Library and Information Science, TU offered a one-year bachelor program to meet the need for a high level of manpower. Nepal National Planning Commission (NNPC) recommended the need for high-level manpower in the library and information science fields. The two-year master program in library and information science started in 2002. Since 2014, TU has offered master-level course only in the semester system (Central Department of Library and Information Science, 2021). Since then, there has been a remarkable increase in the use of ICT components in the LIS curriculum. In Nepal, LIS education has been practiced for nearly three decades. Despite global changes, the teaching and learning of library and information science in Nepal has not witnessed much changes. There was a single revision made. It was at the time of semester system implementation period in the 2014. According to curriculum of the TU MLISc. program, it is aimed at enabling students to use modern information and communication technologies in libraries and information centers. However, the inclusion of modern ICT courses in MLISc curriculum is still under question. So, the study attempted the comparison of Tribhuvan University's MLISc. curricula with other South Asian countries Universities' MLISc curriculum particularly for ICT component.

Objectives of ICT content in LIS education of selected universities

The ICT curriculum of MLISc. programmed among five different countries has been compared, including University of Dhaka, Bangladesh; Shreemati Nathibai Damodar Thackersey Women's University, India; Tribhuvan University, Nepal; University of Punjab, Pakistan and University of Colombo, Sri Lanka. The curriculum of each selected university was studied as per the curriculum objectives, whether those curriculums are ICT oriented or not. The Bangladesh University of Dhaka has set the goal of allowing students to use automation software applications such as Soul, Koha, digital resource management, C++

and Python programming, and library design. It has incorporated a comparatively unique course on content creation, open-source software, programming languages, system design and analysis (University of Dhaka, 2021). The University of Punjab, Pakistan MLISc. course provided theoretical foundations in computer fundamentals and information retrieval. The ICT-related course has been designed with this objective in mind to provide the basis for knowledge of ICT. The primary goal of the course is to familiarize students with the use of computer and information technology in the field of library management. These contents address topics relating to the use of computers in data collection, analysis, and overall thesis writing (The University of Punjab, 2021).

Similarly, the University of Colombo, Sri Lanka has introduced courses in basic computers, programming, and automation with the objective of preparing students for the use of ICT technologies (University of Colombo, 2016). The purpose of the ICT course at Shreemati Nathibai Damodar Thackersey Women's University Mumbai, India, is to equip students with the theoretical and practical skills needed to comprehend the process and strategies involved in creating, organizing, presenting, and utilizing information in a digital context (SNDT Women's University, 2021). The Tribhuvan University, Nepal's MLISc. curriculum aims to enable students to use modern information and communication technologies in libraries (Central Department of Library and Information Science, 2021). In conclusion, the ICT components of MLISc. courses in SAARC countries have the goal of preparing students for the new digital environment. In a similar manner, CDLIS and TU have also incorporated ICT content that would enable students to operate different library software, for instance, Koha and WINSIS. In summary, the MLISc curriculums of those selected universities are found to give priority to ICT-oriented objectives. They have provided a variety of ICT content for this purpose.

Table 1 Comparing objectives of ICT courses in MLISc education of given Universities

Name of universities	Objective of ICT courses
University of Dhaka, Bangladesh	To use library automation software
Shreemati Nathibai Damodar Thackersey Women's University, India	To equip students with the theoretical and practical skills
Tribhuvan University, Nepal	To use modern information and communication technology in libraries
University of Panjab, Pakistan	To provide theoretical foundation in computer fundamentals
University of Colombo, Sri Lanka	To use ICT technologies in libraries

All of them have similar objectives. University of Dhaka has set more specific goal. While Tribhuvan University aim to use modern ICT, but does not specify which time frame does this modern denotes to. Such less specified and less clear objectives could be overwritten with more clear and measurable objectives as that of University of Dhaka. The objectives determine what particular types of ICT courses be chosen.

Table 2 Availability of LISc education in the selected Universities

S.N.	Country	University	Websites	Est. date of MLISc education
1	Afghanistan	-	-	No
2	Bangladesh	Bangladesh University of Dhaka	https://www.du.ac.bd/	1994
3	Bhutan	Royal University of Bhutan	https://www.rub.edu.bt/index.php/en/	No
4	India	Shreemati Nathibai Damodar Thackersey Women's University	https://sndt.ac.in/	1978
5	Maldives	The Maldives National University	https://mnu.edu.mv/	No
6	Nepal	Tribhuvan University of Nepal	https://tribhuvan-university.edu.np/	1995
7	Pakistan	University of Punjab	http://www.pu.edu.pk/	1974
8	Sri Lanka	University of Colombo Sri Lanka	https://cmb.ac.lk/	1993

This **table 2** availability of LISc education in the selected universities explains that the availability of LISc education is not universal for these selected universities. During the study period, it is found that Afghanistan, Bhutan, and the Maldives did not have MLISc. courses. It has suggested that the LISc education have verities of modalities in different countries.

The List of Selected Countries includes their Universities and Websites shows the list of SAARC universities that were chosen for the study. The data is organized into 5 columns and 9 rows, with S.N, country, university, website link, and establishment date of MLISc. in particular universities listed on the row side. The title information is filled in the column accordingly. The syllabus of each selected country can be accessed through the link as above. During the study period, it is found that Afghanistan, Bhutan, and the Maldives did not have MLISc. courses.

1.1 Representation of curriculum content

The curriculum among SAARC countries is collected from the website of a particular university. In the first stage, general scanning of the ICT component of the curriculum is done, then, manually, all the available content is written on paper and a checklist is prepared.

Table 3 Checklist for the ICT components in MLISc curriculum

S.N.	Course / University	AF	Ban	Bhu	Ind	Mal	Nep	Pak	SL
	Theory								
1	Introduction of IT		√		√		√	√	√
2	Computer hardware		√		√		√	√	√
3	Computer software		√		√		√	√	√
4	Data representation, structure design		√		√		√	√	√
5	Internet studies		√		√		√		√
6	Web designing		√		√		√		√

7	Graphic Design	√				
8	Multimedia technology	√		√		√
9	Data communication and networking		√	√		√
10	Programming language	√		√		√
11	Library automation	√	√	√	√	√
12	library opensource software	√		√		
13	Digital library management	√	√	√	√	
14	Library management software	√	√	√		√
15	Content creating	√				
16	Information retrieval technique	√		√	√	√
17	Resource sharing	√	√			√
18	System analysis and design	√				
19	Current trend in IT	√				
20	Cyber Law		√	√		√
	Practical					
21	Operating system	√				√
22	Microsoft office	√			√	
23	Internet tools	√			√	
24	Multimedia Practical					√
25	Webpage creating	√	√	√		
26	Information retrieval in electronic environment	√	√	√	√	√
27	Open-source application	√	√	√		√
28	Communication application			√		√
29	Software Programming	√		√		√
30	Library automation software	√	√	√		√
31	Digital library application management	√	√	√	√	√

The **table 3** checklist for the ICT components in MLISc curriculum indicated the available content on ICT. Since the objectives were set to provide theoretical and practical skills on information technologies, the ICT components were found in both theoretical courses and practical courses. While comparing with other universities' MLISc curriculum, TU has also incorporated almost all theoretical courses except for digital content creation, digital resource sharing, Information system analysis and design, and current trend in IT. In practical content, TU, Nepal does not include the courses of operating system, Microsoft office, Internet tools, and multimedia as these components were found incorporated in other universities. Nevertheless, it does not mean that all these were ultimately advanced IT skills. Librarians are in need of more complex ICT knowledge like Library software design and customization etc. The above listed ICT course content are limited to basic components. University of Punjab, Pakistan have not mentioned and separated practical courses from the curriculum while going through the objectives and the details of the syllabus, mentioned that students will be able to use IT practically.

1.2 Division of available ICT component on broad categories

After preparing the checklist for each university, it is further divided into broad subjects. It aids in the categorization of content in a clear manner for easier comprehension.

Table 4 The List of main components and sub components of LIS curriculum

S. N	Main component of ICT curriculum	Sub component of ICT curriculum
1	Fundamentals of ICT	Introduction of computer
		Historical background
		Computer architecture
		Hardware and software
2	Operating system and programming	MS window, LINUX, UNIX
		Algorithms, flowchart and data structure
		Programming language
3	Networking	Types of networks - LAN, MAN, WAN
		Types of network protocols- TCP/IP
		Basic elements of data communication system
4	Internet basics and features	Connectivity modem
		Email, web browser, web server, protocols
		Internet security- firewall, proxy
5	Data base management	Models- hierarchical, network rational
		Software-ORACLE, PASCAL, SQL, MYSQL
		Common interface standard Z39.50
6	Library automation	Planning
		Library software selection criteria
		Bibliographical database and operations
		Library network and information system
		Case studied on library automation
		Current terns- Hybrid library, Virtual library
7	Digital library	Digital library model
		Open-source software
		Digital collection and development
		Retrieval, interface and evaluation
		Digital preservation and archiving
8	Current trends	Web 2.0, web 3.0, OPAC, RDA, library portal
		resource sharing. Blogs, Post cad
		Artificial intelligence
		Expert system in library
9	Information storage and retrieval	Bibliographic record- MAARC, CCF
		Online search strategy
		Metadata- Dublin code
		Content creation- HTML/XML
10	Computer application	Microsoft office, multimedia, graphics design, web design, programming

Table 4 The list of main components and sub components of LIS curriculum categorizes the names of ICT course content in the MLISc. curriculum based on the check list. The main component decided to expand on the sub components of the ICT curriculum (Bhatt & Walia, 2016).

The course name and scope have been defined with the help of the syllabus, as shown in the table. LIS education is crucial for educating the personnel needed by the country. To teach the fundamentals of modern technology for scientific information management, ICT courses have been incorporated into LIS education.

The fundamentals of ICT content serve as a foundation for theories, principles, and applications of ICT technology. Data communication and networking aid in the development of students' skills in designing, analyzing, and maintaining the library's computer network. Furthermore, it facilitates proper understanding of the operating system, network topologies, and data base structure. The Internet course teaches both theoretical and practical skills for internet studies and web design. Internet security, browsing, search engines, e-mail, and e-conferencing, teacher students how to use standard library automation software to create and organize digital databases. It means teaching how to create and organize digital databases using standard library automation software. It assists in familiarizing processes and techniques involved in creating, organizing, presenting, and using digital environments through the use of open-source software such as D-Space. Library automation provides an overview as well as evaluation, planning, and implementation of automation. The digital library course teaches students how to plan and build digital libraries and websites. The topic of current trends allows students to stay up to date on major issues pertaining to current trends. The information retrieval course provides the concept and technique theoretical and practical knowledge to be familiar with finding possible sources of information and its processing, like searching, retrieving, and presenting it in an evaluative manner.

1.3 Discussion of MLISc. curriculum among SAARC countries

Unirank, a university ranking website, was used to access the entire list of universities. All Afghan University websites and potential sources of information were visited. There are no courses related to libraries and information management available. Similarly, in Bhutan, an IT course at the Bachelor level called Bachelor of Information and Technology is available, which aids in general information management through the use of IT but does not qualify as an information professional. A variety of new programs are being developed and introduced, and there are no courses for master's degrees in library and information science. According to the list of program development and discontinuance in the 2019-20 annual report, they have not purposed the degree. The Royal University of Bhutan was chosen for the profile, and an MLISc. course is expected to be added in the coming days. A diploma in library information is made available by the Maldives National University. There is currently no master's degree program.

When comparing the ICT course of the MLISc curriculum, Nepal has attempted to cover all of the course content, some at the very basic level and some at the advanced application level, as other SAARC countries have done. The most common course titles are:

introduction to IT, computer hardware, software, data representation, and Internet studies. Similarly, the course content for digital library management has been expanded to include topics such as library automation, multimedia and website design, open-source software, information retrieval, and library management software. In comparison to other unique courses in Bangladesh, such as library automation on Koha and SOUL, as well as three other software, graphic design, content creation, creating web documents in HTML, XML, system analysis and design, digital library management software, digital library architecture meta-data, MAARC 21, Dublin core, access control, DRM, and current IT trends. Resource sharing is available in Bangladesh and India. Pakistan has comparatively fewer course titles which cover mostly the fundamentals of information communication technology. PASCAL, Java Script, and MySQL are available respectively in Bangladesh, Nepal, India, and Sri Lanka. The cyber security and cyber law courses are available only in Bangladesh, Nepal and India. Nepal lacks open-source software, digital library management, content creation, resource sharing, system analysis and design, and current trends courses such as web 2.0 and 3.0, including artificial intelligence, blogs, and post cad expert systems in libraries, but among these come courses are available in very basics.

In SAARC countries, available LIS courses give only a conceptual organization for LIS graduates. Generally, we can find a lack of practical application (Karisiddappa, 2017). The different issues and market demand for the country may be different, so the curriculum must be flexible and it should match the various dimensions. LIS schools in South Asia have market-driven curricula (Minishi-Majanja, 2007). In particular, this course content helps to address the real scenarios of library management. The IT-oriented curriculum of LIS helps professionals need to be proficient in the professional skills like to handling technical difficulties (Bhatt & Walia, 2016) for an effective impact on practical fields. Open-source software, library automation, and digital library management are all available at all universities. Different practical courses related to ICT content Microsoft office, internet tools, and basic practical courses are available in Bangladesh and Pakistan. Courses in operating systems, software programming, and testing are available in Bangladesh. There are software programming courses in Nepal, but no courses in software design, development, or testing. Multimedia practical courses are not included in the curriculum, despite the fact that it is an important skill for library professionals. These kinds of practical skills are extremely important while practicing librarianship.

There is no movement for library and information science education in countries such as Afghanistan, Bhutan, and the Maldives (Sukla & Maurya, 2018).We can find a difference in the name of the course title, content and objectives of the syllabus, and theoretical and practical divisions among universities. Bangladesh, India, Nepal, Pakistan, and Sri Lanka are among the countries represented. All of these countries include an IT component in their curricula, as well as theoretical and practical studies. The theoretical component of library

education has been committed to and emphasized. Compiling theory and practice has proven to be a difficult task for the library education system. Researchers have suggested the library-laboratory concept as a mode of instruction incorporating library-centered (Morehead, 1973).

The IT content at the present time is no longer relevant; struggling to compile theory and practice has been a difficult task in library education because library schools are committed to emphasizing theory. With less guidance, the experience becomes more aimless, haphazard, and ultimately counter-productive. He proposed a library-laboratory concept as a mode of instruction that included library-centered activities. It may be time for library educators to focus their attention on the opportunities that this mode of instruction offers (Morehead, 1973).

Developed countries have a rich LIS curriculum, updated education systems with ICT integration, and financial support for students. These are the major differences in education and its systems between developed and developing countries. South Asian countries are dealing with a fairly common issue in terms of ICT education in librarianship and library implication. SAARC countries are not able to adequately respond to emerging information scenarios (Kaur, 2015). A curriculum that is balanced between theoretical knowledge and practical implementation is thought to be the best approach because it helps to meet the need for excellent knowledge of information management. To address the current application trend, practical skills are required (Northern Pegion- Geological Survey of India, 2015).

While comparing content, the gap between theoretical and practical portions is probably larger than in another field (Gorman, 1981). The greater the goalless, haphazard and ultimately counter-productive experience is advanced development of information management, less guidance and inappropriate learning. It may be time for library educators to concentrate on the opportunities inherent in this way of teaching.

1.4 Comparison of ICT components of MLISc. curriculum with Nepal

The ICT course component of ten different titles, including fundamentals of ICT, operating systems and programming languages, networks, internet basics, database management, library management, current trends, computer applications, and information storage and retrieval, has been compared among SAARC countries. There are some differences in course content and titles, but the remaining countries have incorporated significant content on theory and practice into the ICT curriculum. Despite more similarities in incorporating ICT components, TU, Nepal can learn to be more specific as that of Bangladesh. Responding to emerging trends through practical-based ICT courses has been both a challenge and an opportunity. Open-source software, digital library management, content creation, resource sharing, system analysis and design, and current trends courses like web 2.0 and 3.0, including artificial intelligence, RDA, blogs, and post cad expert systems in libraries are all lacking in Nepal. Though the some of these courses are incorporated on non-ICT subject. Apart from these courses, Nepal is also currently offering basic ICT courses. The Nepalese curriculum's ICT component is determined to be at a comparable stage. The ICT course

content on the MLISc. curriculum in Nepal is almost similar to that of other countries. As a result, the curriculum must be designed and customized to meet the needs of the national level, emphasizing practical rather than theoretical courses, and it could, prepare students to cope with the challenges and library professionals for current trends.

1.5 IT related course content in MLISc. curriculum Nepal

Table 5 List of ICT component of MLISc. course in Nepal

Name of Course	Credit hours	Total Credit Hours
Information and Communication Technology (Theory)	3	
Information and Communication Technology (Practical)	3	
Data Communication Networking (Theory)	3	
Computer Programming in Library Automation (Theory)	3	
Computer Programming in Library Automation (Practical)	3	63
Information Retrieval (Theory)	3	
Information Retrieval (Practical)	3	
Total	21/63	1/3

Table 5 List of ICT component of MLISc. course in Nepal is shown in the table. The course's name is divided into a theoretical part and a practical part and refers to its number of credit hours. The program has a total of 63 credit hours, of which 21 credit hours are split across IT content. In addition, this content is sub-divided into 12 credit hours in theory and 9 credit hours in the practical section. There are many non-computer courses, such as cataloging, classification, library management, etc., but their content is computer related. If we calculate that the course is related to IT, it will be higher. But here we only discuss on core ICT based courses. If the LIS program offers a third of the courses in information technology, then it is said to be an ideal program (Hu, 2013). This is quite enough to develop knowledge and skills in potential areas.

1.6 The level of ICT course competencies in Nepal

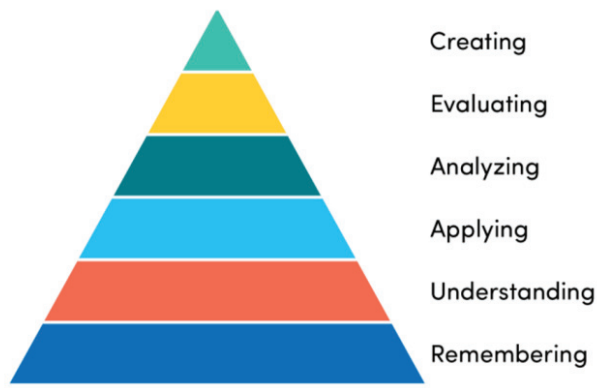

Figure 1 The level of ICT course competencies in Nepal

Bloom's Taxonomic Pyramid ranks the levels of outcomes from the lowest order of cognition (remembering) to the highest (creating) (Curriculum Assessment and Teaching Transformation , 2021). We can see that the ICT components of TU's MLISc. cover the entire range from remembering to applying. The curriculum has developed from basic remembrance to understanding and application level. Course content such as fundamentals of ICT, multimedia, internet studies, and so on have been covered for a quick and basic understanding. However, the ICT content, such as open-source software Koha, HTML, data communication, and PASCAL programming courses, are all at an applied level. Hence, we can say that the ICT component of the MLISc. curriculum is up to application level. It is expected that advanced courses will help to develop technically competent manpower for better analyzing, evaluating, and creating. The MLISc. curriculum of SAARC countries emphasizes remembrance, comprehension, and application of information management.

Conclusion

The ICT course component of ten different titles, including fundamentals of ICT, operating systems and programming languages, networks, internet basics, database management, library management, current trends, computer applications, and information storage and retrieval, has been compared. In Nepal, open-source software, digital library management, content creation, resource sharing, system analysis and design, and current trends courses like web 2.0 and 3.0, including artificial intelligence, blogs, and post cad expert systems in libraries are portion relatively less among other these countries. However, TU CDLIS has incorporated a practical class on Koha for the past two years to fill in the gap. Apart from these courses, Nepal is also currently offering ICT courses. As a result, the MLISc. curriculum in Nepal has an ICT course content that is remarkably similar to that of other countries. The MLISc. curriculum of SAARC countries is market-driven. The available course is simply concerned with providing a conceptual framework for study and is not concerned with in-depth theoretical and practical knowledge. It is necessary to update a considerable quantity of ICT courses in both compulsory and elective, by emphasizing the practical.

Further Research

For future research, a comparative analysis among SAARC countries with a larger sample size can be undertaken.

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