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An Exploratory Study of the Nature and Composition of Current Library and Information Science Programs in Indian State Universities

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An exploratory study of the nature and composition of current library and information science programs in Indian state universities

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ABSTRACT

This brief article explores the current state of library and information science (LIS) programs in terms of their nature and composition in state universities in India. Preliminary findings were based on a content analysis of representative information regarding LIS education available on the websites of all state universities and colleges that offer LIS programs in India. Findings indicated broad trends in administrative structuring and nomenclature of LIS programs which requires standardization. The type of degrees awarded, the composition of faculty positions, student places per year and student-faculty ratios was also found to be varied among the different institutions. The lack of detailed and up-to-date information on university websites was a barrier in collecting accurate data on LIS programs. The minimal web information must be addressed by LIS professionals to further develop interest in the discipline and to increase the number of students graduating in LIS education. The findings reported here are hoped to direct future research in other domains of LIS education which may help determine better strategies and practices for adopting in LIS educational settings in India.

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INTRODUCTION

Library and information science (LIS) education in India has a history (Kumar and Sharma, 2010; Satija, 1999) that has been traced back to two students of Melville Dewey during the early twentieth century (Sarkhel, 2006). In 1911, W. A. Borden, librarian of the Young Men's Institute, New Haven, Connecticut, started the first training program for library workers at the Central Library in Baroda, Gujarat. This was followed by the work of A. D. Dickinson who established a training course in 1915 in erstwhile Panjab University (now in Pakistan), which was considered to be the second library school established in the world at that time. Thereafter, other universities and library associations also started setting up library schools and courses in India (Mangla, 1998). The outstanding contributions of S. R. Ranganathan (1892–1972), considered 'the father of library science' in India, placed Indian librarianship on the global map as a result of the worldwide impact of his work (Garfield, 1984). He is well-known for the five laws of librarianship (Ranganathan, 1931), colon classification (Ranganathan, 1933), chain indexing for deriving subject-index entries (Ranganathan, 1938), amongst other contributions. Ranganathan was also an LIS educator and a faculty member in various Indian universities, making significant contributions such as starting the first LIS doctoral program at the University of Delhi in 1948 (Kumar, 1987).

More recently, with the advent of the digital revolution, growth in global information networking and the telecommunications industry, and the pervasive use of the internet, research on LIS education in India has focused on new developments to meet the contemporary challenges of the 21st century (Mahapatra, 2006; Malhan, 2009). Areas have included training students in a hybrid environment (traditional print and digital) (Dr. B. R. Ambedkar Open University, n.d.; Gopakumar and Baradol, 2009); developing digital libraries and digital information management (Phuritsabam, 2009; Varalakshmi, 2009); the introduction of learning and electronic distance education (Ghosh, 2001; Ghosh and Sevukan, 2006; Kanjilal, 1998); training in web-based systems, website development, information and communication technologies for librarians (Biswas, n.d.); updating computer software/hardware and operating system design (Jain, 2007); programming and database management (Singh, 2003a), and library automation and fundamentals of the internet (Singh, 2003b), to name a few. Based on the previously mentioned studies, some recent recommendations for LIS education in India include the need for an overhaul and monitoring of LIS curricula (Singh, 2008; Karisiddappa, 2001); the necessity of technology integration, practical training and the teaching of new information literacy competencies and skillsets (Kumar, 2004; Rao, 1994; Karisiddappa et al., 2004). There is also the urgent need in India for a statutory body similar to the American Library Association to accredit programs according to international standards (Singh and Shahid, 2010).

Many findings of studies of LIS education in India suggest that the trajectory of developments needs to replicate the program conceptualization, policies, and strategies that have emerged in the West, in particular the United States. A cursory examination of the broad social, cultural, and political factors shaping the economic and technological growth in India however reveals a unique set of internal and external conditions that have impacted on development in the country (Saperstein and Rouach, 2002). These complex and interacting circumstances unique to India have influenced every dimension of life, including LIS education, and do not necessarily fit with models and approaches adopted in the United States and other western countries (Friedman, 2005). The distinct regional circumstances and challenging experiences in India with regard to its technological progress have provided a unique substratum for the emergence of LIS education from its long slumber. It is still however yet to be seen what form of growth and development the discipline will take (Sharma, 2005). Amidst this uncertainty, one thing is certain: namely, that LIS education and its integration of technology and the development of information infrastructures to further this discipline cannot be understood and deciphered solely by following the directions taken by other countries (Mortezaie and Naghshineh, 2002). Poverty, illiteracy, limited public awareness, corruption (Sahu, 2004), an inefficient and suffocating bureaucracy (Dickinson, 2009) and lack of resources, amongst other factors, pose extremely difficult conditions that LIS education in India must address and overcome if it is to find its place, direction, and recognition in the global arena. What is certain regarding any future efforts to develop Indian LIS education in the 21st century, is that government support will be needed at national, state, and local levels, to provide appropriate social and technological infrastructures to overcome various limiting bureaucratic and administrative hurdles, as well as to provide the necessary legal, financial, and political support (Varalakshmi, 2007).

In order to find a contextually sensitive approach to LIS education requires a detailed examination of Indian universities and colleges in relation to LIS education, the nature and composition of the LIS programs that are offered, and a closer scrutiny of LIS curricula and the kinds of subjects and topic areas represented. A detailed context-based examination of LIS education will allow for an evidence-based analysis of the specific kinds of decisions and developments that need to be made for LIS education in India to take a path of its own, instead of replicating some problematic models adopted in other parts of the world. There is also the need to identify efforts in LIS education from the West (including the United States) and beyond, that have had positive impacts in those regions, and to critically analyse their potential to reproduce similar results in India. As an example, American state-funded universities and colleges have an enviable reputation of providing cutting-edge education at a reasonable and attainable cost that has propelled graduates to leadership in their chosen areas of study (Hurley, 2008; Yudof, 2010). It is questioned whether similar such state-sponsored universities and colleges in India can play a significant role for LIS education by providing much-needed social, technological, financial, and administrative infrastructures, that integrate political and economic considerations, to help propel these institutions in the international academic marketplace. Unfortunately, there have been no comprehensive and detailed studies of government-managed state universities and colleges in India, or analysis of government support or lack thereof, of LIS educational programs in these institutions. This article begins to address these questions by exploring the nature and composition of LIS programs in state universities and colleges in India. Initial findings reported are hoped to direct future research in other domains of LIS education e.g., curriculum development in state universities and colleges which may help determine best strategies and practices for adopting in LIS educational settings in India. This research is also aimed at highlighting the existing and potential role of Indian state universities and colleges in providing the necessary administrative and technological infrastructures (and other resources) to support the growth of LIS education in response to the challenges and complexities of the 21st century.

RESEARCH METHODS

Exploratory findings reported in this article are based on a content analysis of information representing the LIS education available on the websites of all the state universities and colleges that offered LIS programs during the fall of 2010 in India. The primary data collection made up a pan-India knowledge base of current LIS programs and curricula in India at the time of study. A second dataset was sourced from various peer-reviewed journals, online resources such as organizational websites, class lectures, book chapters, and conference proceedings. This was intended to help develop theoretical arguments, practitioners' viewpoints, and empirical evidence to support future insights to contemporize LIS programs and to standardize the LIS curricula in India.

This article reports only on the nature and composition of LIS programs in state universities and colleges in India based on a semi-quantitative analysis of web-based content materials. The study focused only on state-sponsored or state-managed LIS programs, filtering out LIS programs offered by other academic institutes in India; hence the findings cannot be generalized to the entire landscape of Indian LIS education. Data analysis involved application of grounded theory (i.e., open, axial, and selective coding) to determine the nature and composition of current LIS programs in India, as discussed later in this article.

Due to the web-dependent nature of this study, the academic institutes which did not contain up-to-date content of LIS programs at the time of data collection may have been misrepresented. LIS schools or programs with no web-presence were left out of data collection efforts.

RESEARCH FINDINGS

LIS programs in state universities: broad trends

As of fall 2010 when data collection was carried out, India had 28 states and seven union territories. States and union territories have constant shifting political boundaries and sometimes ambiguous distinctions as to their political and administrative structure. Due to the differences between states and union territories, the seven union territories in India were excluded from data collection and analysis in this study. The National Capitol Territory of Delhi is an example of a territory that was not included in the study as it is technically considered a federally administered union territory, even though its political administration closely resembles that of a state of India with its own legislature, high court, and executive council of ministers headed by a chief minister.

All state-sponsored or state-managed universities selected in this study were included based on either a state or central government penal code or act. The universities that are under legal jurisdiction are controlled by legislatures at state-level or parliament at the national-level. Banaras Hindu University (BHU), one of the most highly reputed institutions in India, is an example of a university established under the Parliamentary legislation—BHU Act 1915 that has been offering LIS education since 1941. In contrast, the University of Calcutta was established by an Act of the Legislative Council (Act No II of 1857) of British India and began offering an LIS degree in 1945.

All the programs offering LIS education in India have English as a medium of instruction, in addition to the use of regional languages for specific instruction in particular applications. The geographical location of the state-sponsored or state-managed universities studied shows that these academic units are not just concentrated in state capitals but also in distant parts of their respective states. This demonstrates the efforts of the Indian government to spread LIS education to diverse pockets of the country.

Thirty universities in 21 out of 28 states of India were found to offer LIS education which accounted for seventy-five percent of the states in India providing some form of LIS education. Seven states were found to have multiple LIS programs offered across different locations, as shown in Table 1. These states included: Bihar (Magadh University and Patna University), Chhattisgarh (Chhattisgarh University and Guru Ghasidas Vishwavidyalaya), Haryana (Central University of Haryana and Maharishi Dayanand University), Karnataka (Bangalore University, Gulbarga University, and Karnataka State Open University), Madhya Pradesh (Awadhesh Pratap Singh University and Doctor Hari Singh Gour Vishwavidyalaya), Maharashtra (University of Pune and Sant Gadge Baba Amravati University), and Utter Pradesh (Babasaheb Bhimrao Ambedkar University, Banaras Hindu University, and Bundelkhand University). The states with universities that did not offer any LIS programs included: Arunachal Pradesh, Goa, Himachal Pradesh, Jharkhand, Nagaland, Sikkim, and Tripura. These states either did not offer any LIS education, or academic institutes from these states with established LIS programs did not have a web-presence. One institute Sikkim University had 'Library and Information Science' under its Proposed Programmes (Sikkim University, 2010).

Administrative structuring

Administratively, LIS departments were structured under different schools and disciplines, which were broadly categorized based on these disciplines, as seen in Table 2. An analysis of the names of the administrative units under which the LIS departments were placed, revealed fuzzy categories including: library and/or information-related terms (e.g., 'informatics,' 'library,' 'information' etc.); arts, social sciences, and/or science-related terms (e.g., 'arts,' 'social sciences,' 'science,' 'education,' etc.); management-related terms (e.g., 'economics management,' 'commerce,' etc.); or a mixture of the former terms (e.g., 'arts and commerce,' 'arts, education, and information sciences,' etc.). The differences identified in the placement of LIS departments under the administrative units indicated an inconsistent representation or philosophical basis, lacking systematic understanding of where to place LIS education within the larger academic administrative structure of the state universities in India. Future research needs to examine the impact of this scattered placement of LIS education across disciplines in state universities in India. A majority of sixty-two percent (18) of the administrative units under which LIS departments were placed in the 29 state universities, did not include any library or information-related terms. Interestingly, it was found that the larger administrative units offering LIS programs revealed faculty originating from a much wider range of disciplines which is thought to have resulted in the interdisciplinary conceptulization, services, ties and programs under LIS.

Further analysis of the current status, trends, practices, policies, public perception, and role of the discipline at the local, regional, and national levels is required for the appropriate placement of LIS programs.

Nomenclature of LIS departments

Although the nomenclature of the LIS schools in India is not uniform according to Babu and Babu (2007), the present study reflected a different trend with a majority of 20 LIS departments (66.7%) in the 30 state universities identifying themselves as 'Department of Library and Information Science'. One state university (Manipur University in Manipur) identified its LIS department as 'Library and Information Science Department'. Additionally, three Indian state universities (Bundelkhand

Table 1. Names of the LIS departments in India and the websites where the relevant information was found (verified as of March 2012)

No. State	Name of university	Name of LIS department	LIS department website
1. Andhra Pradesh	Andhra University	Department of Library & Information Science	http://www.andhrauniversity.info/arts/library/
2. Assam	Assam University	Department of Library & Information Science	http://www.aus.ac.in/schools_departments.htm
3. Bihar	Magadh University	Library & Information	http://www.mudde.org/index-2.html#004
4. Bihar	Patna University	Institute of Library Science	http://patnauniversity.ac.in/online/index.php?option=com_content&view=article&id=47&Itemid=47
5. Chhatisgarh	Guru Ghasidas Vishwavidyalaya	Department of Liabrary (sic) & Information Science	http://www.ggu.ac.in/Academic_Course_Library%20&%20Information%20Sci.html
6. Chhattisgarh	Chhattisgarh University	Not found	
7. Gujarat	Gujarat University	Department of Library & Information Science	http://www.gujaratuniversity.org.in/web/NWD/Departments/TeachDep/Others/DLIS.pdf
8. Haryana	Maharshi Dayanand University	Department of Library & Information Science	http://www.mdurohtak.ac.in/info/acad_fac_socscie_libraryinformscience.html
9. Haryana	Central University of Haryana	Department of Library and Information Sciences	http://www.cuharyana.org/Pro.pdf
10. Jammu and Kashmir	University of Jammu	Department of Library and Information Science	http://www.jammuuniversity.in/departments/lib%20science/intro.asp
11. Karnataka	Bangalore University	Department of Library & Information Science	http://india.studybot.org/bangalore/bangalore-university/
12. Karnataka	Gulbarga University	Department of P. G. Studies and Research in Library & Information Science	http://www.gulbargauniversity.kar.nic.in/FacSocSci/LibZInfoSci.html
13. Karnataka	Karnataka State Open University	Department of Library and Information Science	http://ksoumysore.edu.in/LibInfodep.html
14. Kerala	University of Kerala	Department of Library & Information Science	http://www.keralauniversity.ac.in/departments-centres-and-other-institutions.html; http://www.keralauniversity.ac.in/dlis
15. Madhya Pradesh	Awadhesh Pratap Singh University	Master of Library And Information Science	http://apsurewa.ac.in/course_details.aspx?cd=MasterofLibraryAndInformationScience
16. Madhya Pradesh	Doctor Hari Singh Gour Vishwavidyalaya	Department of Library and Information Sciences	http://www.dhsgsu.ac.in/department.php?school=14
17. Maharashtra	University of Pune	Department of Library & Information Science	http://www.unipune.ac.in/dept/mental_moral_and_social_science/library_and_information_science/default.htm
18. Maharashtra	Sant Gadge Baba Amravati University	Department of Library and Information Science	http://sgbau.ac.in/SGB%20Amt%20Uni%20Website/libraryscience.html

(*continued on next page*)

Table 1. (*continued*)

No. State	Name of university	Name of LIS department	LIS department website
19. Manipur	Manipur University	Library and Information Science Department	http://manipuruniv.ac.in/en/Schools/Social_Sciences/Library_and_Information_Science/index.html
20. Meghalaya	North-Eastern Hill University	Department of Library & Information Science	http://www.nehu.ac.in/Schools/Economics%20&%20Management/Library%20Science/course.php; http://groups.google.com/group/dlis-nehu-shillong/about
21. Mizoram	Mizoram University	Department of Library & Information Science	http://www.mzu.edu.in/schools/library%20and%20information%20science.html
22. Orissa	Sambalpur University	Department of Library & Information Science	http://www.suniv.ac.in/
23. Punjab	Panjab University	Department of Library & Information Science	http://libraryscience.puchd.ac.in/
24. Rajasthan	University of Rajasthan	Department of Library Science	http://www.uniraj.ac.in/
25. Tamil Nadu	Alagappa University	Department of Library and Information Science	http://www.alagappauniversity.ac.in/departments/aboutus.php?dept_id=43
26. Uttar Pradesh	Babasaheb Bhimrao Ambedkar University	Department of Library and Information Science	http://www.bbauindia.org/library_info_science/dept_library_info.htm
27. Uttar Pradesh	Banaras Hindu University	Department of Library and Information Science	http://www.bhu.ac.in/dlis/
28. Uttar Pradesh	Bundelkhand University	Department of Library and Information Sciences	http://www.bundelkhanduniversity.org/HTML/departments.html
29. Uttarakhand	Hemwati Nandan Bahuguna Garhwal University	Department of Library & Information Science	http://hnbgu.ac.in/images/ad/Circular/UUGC%20final%20format.pdf
30. West Bengal	University of Calcutta	Department of Library & Information Science	http://www.caluniv.ac.in/academic/academic_frame.htm

University in Utter Pradesh, Central University of Haryana in Haryana, and the Doctor Hari Singh Gour Vishwavidyalaya in Madhya Pradesh) identified their LIS departments as the 'Department of Library and Information Sciences'. One LIS department each identified itself as 'Library & Information' (Magadh University in Bihar), 'Institute of Library Science' (Patna University in Bihar), 'Department of P. G. Studies and Research in Library & Information Science' (Gulbarga University in Karnataka), 'Department of Library Science' (University of Rajasthan in Rajasthan), and by the name of the degree (Master of Library And Information Science (M.Lib.Sc.) in the Awadhesh Pratap Singh University in Madhya Pradesh). No name was found for one LIS department (3.33%) (Chhattisgarh University in Chhattisgarh). Table 1 identifies the names of the LIS departments in India and the websites where the relevant information was found (verified as of March 2012). Some points however need to be kept in mind when considering the nomenclature of the LIS departments:

- Sometimes Indian universities present ambiguities in having multiple designations which is reflected in the naming of their LIS departments and the administrative units under which they are administratively placed. For example, Magadh University in Bihar identifies its LIS department name as 'Library and Information' under 'Programs' on the top of the webpage (Magadh University Directorate of Distance Education., n.d.) though the same website identifies its bachelor's and master's degree programs as 'Library & Information Science'.

Table 2. Administrative units under which LIS departments were placed in the various state universities of India

Administrative unit	No. of LIS departments	Name of the administrative unit under which LIS is located in the various state universities
Social Science(s)	6	Faculty of Social Sciences... 4 - Gulbarga University, Maharshi Dayanand University, Sant Gadge Baba Amravati University, University of Jammu. School of Social Science... 1 - Karnataka State Open University - School of Social Sciences...1Manipur University
Arts	5	Faculty of Arts - Banaras Hindu University, Bundelkhand University, Guru Ghasidas Vishwavidyalaya, Panjab University, University of Kerala.
Library and Information Science - (independent unit)	5	Department of Library and/& Information Science - Gujarat University, Magadh University, Sambalpur University. Institute of Library Science - Patna University. Swami Vivekananda School of Library Sciences - Assam University.
Education	2	Faculty of Education - University of Rajasthan Faculty Council for Post-Graduate Studies in Education, Journalism & Library Science - University of Calcutta.
Arts and Commerce	1	College of Arts and Commerce - Andhra University.
Arts, Communication and Languages	1	School of Arts, Communication and Languages - Hemwati Nandan Bahuguna Garhwal University
Arts, Education, and Information Sciences	1	School of Arts, Education, and Information Sciences - Dr.Hari Singh Gour Vishwavidyalaya.
Computer Science and Informatics	1	School of Computer Science and Informatics - Central University of Haryana.
Correspondence Courses	1	Correspondence Courses - Awadhesh Pratap Singh University.
Economics, Management, etc.	1	Economics, Management, etc. - North-Eastern Hill University.
Economics Management and Information Sciences	1	School of Economics Management & Information Sciences - Mizoram University.
Information Science and Technology	1	School of Information Science & Technology - Babasaheb Bhimrao Ambedkar University.
Library	1	Central Library - Alagappa University.
Mental, Moral, and Social Sciences	1	Faculty of Mental, Moral, and Social Sciences - University of Pune.
Science	1	Faculty of Science - Bangalore University.
Not found	1	Chhattisgarh University.
Total	30	

Similarly, the Assam University identifies the name of its LIS department as both 'Department of Library & Information Science' and 'Department of Library Science' on the same website of the department (Assam University, 2009).

- The naming of administrative units and their LIS departments in India has been under constant flux and the data reported in this paper was the state as of September 2010 (though some updated aspects were verified during March 2012 and that has been indicated at relevant points in the narrative). For example, the LIS department in the University of Jammu changed its name from 'Department of Library Science' to 'Department of Library and Information Science' in 2008 (University of Jammu, 2010) (URL: http://www.jammuuniversity.in/departments/lib%20science/intro.asp) though this was reflected on the website in 2010.

A majority of 26 LIS departments (89.7%) found in the 29 state universities of India that were included in this research identified themselves as 'departments'. One LIS department each (3.5%) was either identified as an 'institute' or by the subject name (i.e., 'library and information') and one LIS school (3.5%) did not have any department associated with it.

The date of establishment of LIS departments and the type of degrees awarded

The date of establishment of the LIS departments in the state universities under study were found to vary widely, as shown in Table 3. The longest established LIS department was that of Andhra University, Andhra Pradesh, dating back to 1935, while the newest LIS department in the Maharishi Dayanand University, Haryana, was initiated in 2010.

The types of LIS programs offered at the different institutions included bachelor's, master's, and doctoral level degree programs. Certifications for LIS education were also offered. Master level degrees were the most common type of degree obtained by students in the state universities with LIS programs. Of the states with institutions offering LIS programs, twenty (95%) out of 21 state universities offered master level degree programs as either a Master's of Science (M.Sc.) or Master's of Philosophy (M. Phil.). All the universities that offered a M. Phil. LIS degree also offered M.Sc. level degrees in LIS, although the reverse was not always true. The data in Table 3 indicates a total of 27 universities that offered master level degree programs however seven of these were branch campuses of the same university in multiple locations. At least one branch of a state university that offered a bachelor's degree in LIS also offered a master's of science in LIS (except the Hemwati Nandan Bahuguna Garhwal University in Uttarakhand), but the reverse was not true. The pre-requisites or educational background required for admission of students to master's or doctoral level degree LIS programs was not clearly outlined on all university websites. This lack of information was a barrier in estimating the extent to which students pursuing higher education in LIS in India have an interdisciplinary academic background.

Faculty composition

Out of a total of 102 listed LIS faculty members of the 23 state universities for which numbers were available, a maximum of 25 positions (24%) were allotted to lecturers, as seen in Fig. 1. The number of positions allotted to professors however was much higher (22%) or [23] in comparison to the number of positions allotted to associate professors (6%) or [6] and assistant professors (5%) or [5]. Universities in Bihar state (Magadh University, Patna University) and Uttarakhand state (Hemwati Nandan Bahugana Garhwal University) did not detail the number of their LIS faculty positions. One university in the states of Chhattisgarh (Chhattisgarh University), Haryana (Central University of Haryana), Karnataka (Karnataka State Open University), and Madhya Pradesh (AwadheshPratap Singh University) did not report any numbers regarding their LIS faculty positions though, other state-sponsored or state-managed universities in these states did provide numbers of these positions.

Student composition

A total of 1288 LIS student places were recorded for the 21 state universities under study, a majority of which were for master's level programs (51%) or [647], followed by the bachelor's level programs (36%) or [448] (Fig. 2). The four states of Bihar (Magadh University and Patna University), Orissa (Sambalpur University), Tamil Nadu (Alagappa University), and Uttarakhand (Hemwati Nandan Bahugana Garhwal University) did not report the number of LIS student places available per year at their universities. One university in each of the states of Chhattisgarh (Chhattisgarh University), Haryana (Central University of Haryana), Karnataka (Karnataka State Open University), and Madhya Pradesh (Awadhesh Pratap Singh University) also did not report the numbers of LIS student places available per year, though other state-sponsored or state-managed universities in these states did provide these numbers.

Table 3. Different types of LIS degree programs offered in the state universities in India. [Note: The 'other' column includes integrated UG/PG programs, diploma programs, post-graduate degrees, and certificate courses. Information that was not available on the university websites were left blank]

No.	State	Name of University	Year LIS Progr. Establ.	LIS Progr. Age	Bachelor	M.Sc.	M. Phil.	Ph.D.	Other	Total
1.	Andhra Pradesh	Andhra University	1935	75		✓	✓	✓		3
2.	Assam	Assam University	2009	1		✓				1
3.	Bihar	Magadh University			✓	✓				2
4.	Bihar	Patna University			✓					1
5.	Chhattisgarh	Chhattisgarh University	1985	25	✓	✓			✓	3
6.	Chhattisgarh	Guru Ghasidas Vishwavidyalaya				✓		✓	✓	3
7.	Gujarat	Gujarat University	1964	46	✓	✓				2
8.	Haryana	Central University of Haryana	2010	0						
9.	Haryana	Maharshi Dayanand University				✓				1
10.	Jammu and Kashmir	University of Jammu	1971	39	✓	✓		✓		3
11.	Karnataka	Bangalore University	1975	35		✓		✓		2
12.	Karnataka	Gulbarga University	1979	31		✓	✓	✓		3
13.	Karnataka	Karnataka State Open University			✓	✓				2
14.	Kerala	University of Kerala	1961	49		✓	✓	✓		3
15.	Madhya Pradesh	Awadhesh Pratap Singh University			✓	✓				2
16.	Madhya Pradesh	Dr. Hari Singh Gour Vishwavidyalaya	1970	40	✓	✓				2
17.	Maharashtra	University of Pune	1958	52	✓	✓	✓	✓		4
18.	Maharashtra	Sant Gadge Baba Amravati University			✓	✓			✓	3
19.	Manipur	Manipur University	1986	24	✓	✓		✓		3
20.	Meghalaya	North-Eastern Hill University	1985	25		✓		✓		2
21.	Mizoram	Mizoram University	2002	8		✓	✓	✓		3
22.	Orissa	Sambalpur University	1976	34		✓	✓		✓	3
23.	Punjab	Panjab University	1960	50		✓		✓		2
24.	Rajasthan	University of Rajasthan	1960	50	✓	✓		✓		3
25.	Tamil Nadu	Alagappa University	2006	4	✓	✓	✓	✓	✓	5
26.	Uttar Pradesh	Babasaheb Bhimrao Ambedkar University				✓		✓		2

(*continued on next page*)

Table 3. (*continued*)

No.	State	Name of University	Year LIS Progr. Establ.	LIS Progr. Age	Bachelor	M.Sc.	M. Phil.	Ph.D.	Other	Total
27.	Uttar Pradesh	Banaras Hindu University	1941	69		✓		✓	✓	3
28.	Uttar Pradesh	Bundelkhand University	1986	24	✓	✓		✓		3
29.	Uttarakhand	Hemwati Nandan Bahuguna Garhwal University			✓					1
30.	West Bengal	University of Calcutta	1945	65	✓	✓	✓	✓		4
	TOTAL				16	27	8	17	6	74

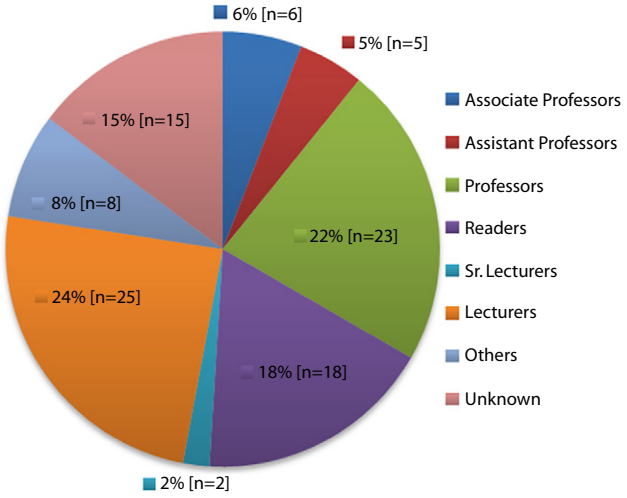

Figure 1. The proportion of faculty members according to rank in the state universities of India. [Note: The 'unknown' category includes those universities where the number of positions was known but the rank of the positions was unknown. The 'other' category includes librarians, deans, and contributory teachers].

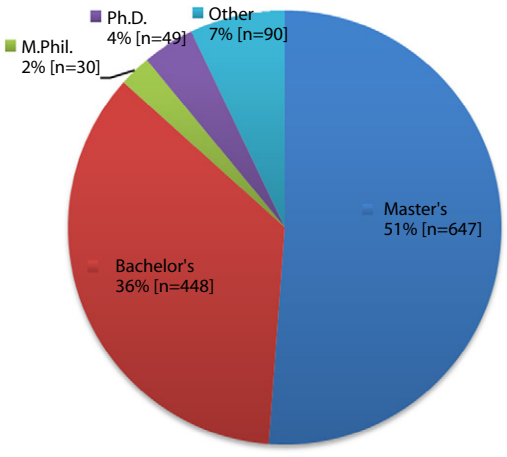

Figure 2. The number of student places available per year in the different LIS degree programs offered in the state universities of India. [Note: Incomplete data is presented due to the limited availability of information. The 'other' category includes integrated UG/PG programs, certificate courses, and postgraduate degrees].

Student-faculty composition ratio

The University of Pune, Maharashtra, had the greatest number [12] of faculty members for LIS education programs (Table 4). From the data available for the 23 LIS programs in the state universities, the average number of LIS faculty members per program was 4.4 and the median calculated was 4. Andhra University, Andhra Pradesh, enrolled the greatest number of students [190] per academic year to its LIS program in comparison to other universities. Based on the available data from 21 universities, the average number of students admitted per year to LIS programs was 61.3 with 46 as the median. No correlation was identified for the number of students admitted per year to LIS programs and the number of faculty members available to teach. The LIS programs in the Bangalore University in Karnataka, University of Pune in Maharashtra, and Mizoram University in Mizoram, had the lowest student-to-faculty ratio of 3:1. In contrast, the LIS programs in the Gujarat University in Gujarat, Guru Ghasidas Vishwavidyalaya in Chhattisgarh, and Sant Gadge Baba Amravati University in Maharashtra, were recorded as having the highest student-to-faculty ratios of 52:1, 50:1, and 45:1 respectively. It should be noted that the ratios are not necessarily an indication of the quality of education offered in these LIS programs.

DISCUSSION AND CONCLUSION

Although this study was only exploratory in nature, the data presented here provides worthwhile insights of Indian state university LIS programs. The potential impact of the state-sponsored or state-managed universities offering LIS programs is great, due to the wide geographical spread of these academic institutions. Akin to the Indian railways, the fourth largest network in the world (Central Intelligence Agency, 2011) that reaches the remotest corners of the country, the state university LIS programs with their country-wide distribution have the potential to provide effective LIS education throughout the vast breadth of the second largest populated country in the world. The numerous bureaucratic and political barriers challenges have prevented India in reaching its full potential in LIS education. LIS educators, administrators and librarians must realize their potential to overcome the limitations that have prevented the development of the discipline, by providing relevant and cutting-edge education in information creation-organization-dissemination services in libraries to meet the urgent demands of the 21st century. This study has exposed a lack of detailed, complete, and up-to-date information about Indian state university LIS programs on the internet. Minimal web information, web design, and web development are factors that must be addressed by LIS professionals to further the discipline.

The varied administrative structuring and nomenclature of LIS programs identified in the Indian state universities necessitates further assessment of ways in unifying the varied administrative units and departments across which LIS programs in India are housed to strengthen the interdisciplinary ties and content. A similar approach is also required for LIS education offered in different LIS degrees programs to strengthen the discipline and develop more advanced information services. The low number of LIS faculty members in some of the institutions surveyed calls for the generation of more revenue to allow for the creation of more LIS faculty positions, which in turn may lead to an increase the number of students enrolling. Overall, this would result in more students graduating with information skills and technology competencies that will allow them to better leverage themselves competitively into the global workforce.

Findings in this article are merely exploratory in nature however they highlight the need for more extensive research into LIS education. Collection of qualitative feedback from LIS administrators could be a way of better understanding the trends identified in such a region-wise analysis. Basing future studies in LIS education on those that have been performed in Canada and Europe, particularly in the Scandinavian countries (Abdullahi and Kajberg, 2004; Virkus and Harbo, 2002), could be helpful in identifying strategies in how libraries in these countries have mobilized community-based, participatory action to play a more significant role in society. A holistic approach to the study of LIS curricula in India can reveal strategies for the improvement and standardization of LIS programs offered across various universities in India. This short exploratory study was a small step towards that goal.

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Table 4. The total number of faculty positions and the student places available per year in LIS programs in Indian state universities. [Note: Information that was not available on university websites were left blank. Ratios were rounded to the nearest whole number]

No.	State	Name of University	Student Seats per Year	Total No. of Faculty	Student/Faculty Ratio
1.	Andhra Pradesh	Andhra University	190	5	38:1
2.	Assam	Assam University	25	2	13:1
3.	Bihar	Magadh University			
4.	Bihar	Patna University			
5.	Chhattisgarh	Guru Ghasidas Vishwavidyalaya	50	1	50:1
6.	Chhattisgarh	Chhattisgarh University			
7.	Gujarat	Gujarat University	52	1	52:1
8.	Haryana	Maharshi Dayanand University	40	3	13:1
9.	Haryana	Central University of Haryana			
10.	Jammu and Kashmir	University of Jammu	45	2	23:1
11.	Karnataka	Bangalore University	18	6	3:1
12.	Karnataka	Gulbarga University	101	5	20:1
13.	Karnataka	Karnataka State Open University			
14.	Kerala	University of Kerala	31	5	6:1
15.	Madhya Pradesh	Awadhesh Pratap Singh University			
16.	Madhya Pradesh	Doctor Hari Singh Gour Vishwavidyalaya	50	2	25:1
17.	Maharashtra	University of Pune	33	12	3:1
18.	Maharashtra	Sant Gadge Baba Amravati University	90	2	45:1
19.	Manipur	Manipur University	46	4	12:1
20.	Meghalaya	North-Eastern Hill University	28	7	4:1
21.	Mizoram	Mizoram University	20	7	3:1
22.	Orissa	Sambalpur University		4	
23.	Punjab	Panjab University	45	4	11:1
24.	Rajasthan	University of Rajasthan	101	4	25:1
25.	Tamil Nadu	Alagappa University		2	

(*continued on next page*)

Table 4. (*continued*)

No.	State	Name of University	Student Seats per Year	Total No. of Faculty	Student/Faculty Ratio
26.	Uttar Pradesh	Babasaheb Bhimrao Ambedkar University	30	5	6:1
27.	Uttar Pradesh	Banaras Hindu University	46	5	9:1
28.	Uttar Pradesh	Bundelkhand University	100	5	20:1
29.	Uttarakhand	Hemwati Nandan Bahuguna Garhwal University			
30.	West Bengal	University of Calcutta	147	9	16:1
	Totals		**1288**	**102**	

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