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ICT SKILLS IN LIBRARY SCIENCE: AN INNOVATION

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ABSTRACT

The purpose of this study is to theoretically analyze the researches done by various scholars by investigating the amount of "information & communications technology (ICT)" expertise held by "LIS professionals" working in libraries; the purpose of this study is to reach findings that will lead to improvements in the quality of library services. In the current investigation, the research was done on the base of the data which were collected through the use of a survey method that involved the administration of a standardized questionnaire. One hundred and sixty "librarians and information science (LIS) specialists" working at libraries were polled, and each and every one of them participated in the survey. A Likert scale of five points was used to assess the respondents' level of expertise in "information & communications technology". According to the findings of the study, the vast majority of "LIS professionals" have adequate "information & communications technology" knowledge to run libraries. However, there are noticeable outliers, notably in areas such as operating system & software administration. The results of this study can assist individuals in increasing their "information & communication technology (ICT) skills", therefore enabling them to better accommodate the requirements of the digital era. The findings, taken as a whole, underline the necessity of having competence in "information & communication technology" in the efficient delivery of library services for the growth of the library as a whole. Assisting working "LIS professionals" in becoming adept in a number of areas would

be facilitated by incorporating courses in "ICT skills" into the academic and professional curriculum, and the findings of our current study would make it possible for the authorities at the University of Delhi to do exactly that. The current study also provided "LIS professionals" with a platform via which they could zero in on the precise areas in which they needed to increase their understanding of "ICT" in the digital age in order to provide superior service to their clients.

KEY WORDS: ICT, Library, Professionals, Software, Administration

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INTRODUCTION

Since the beginning of recorded history, libraries have played an important role in society. They act as centres of community and gathering places, providing individuals with the opportunity to acquire the information they require. Because of the evolution of "Information & communication Technology (ICT)" and its usage in a variety of library operations, the vast majority of the transactional and other key services offered by "Library & information Science (LIS) professionals" are now conducted digitally or electronically. Libraries place a significant amount of importance since they support as a major hub for a variety of academic activities including research, education & study. The proliferation and widespread adoption of various "ICT techniques" have been beneficial to all types of libraries. These techniques have enabled greater efficiency in library operations (including "collection, cataloguing, storage, retrieval, dissemination, and user authentication") as well as a more secure environment. Libraries currently provide not just printed materials but also digital resources and services for accessing information as a consequence of improvements in "information & communication technology". Previously, libraries only offered printed materials. Consumers will no longer be required to wait in order to obtain the information they require as a result of the transition from analogue to digital as the predominant mode for the dissemination and retrieval of information. Training in the use of a variety of "information & communications technology (ICT) tools", such as "automation, bibliographic standards, ICT-based library services, web 2.0 skills, mobile information services, integrated library management systems (ILMS), citation management systems (CMS), information retrieval (IR)", etc., is necessary for "LIS professionals" in order for them to be able to perform their jobs effectively. "Library & Information science (LIS) experts need to have

marketable skills in “information & communication technology (ICT)” in order for them to be productive in their employment. “LIS experts” also need to frequently brush up on their “information & communications technology (ICT) skills” in order to stay competitive in the current digital workplace. Therefore, in order for “LIS professionals” to be able to fulfil their duties, it is essential for them to have experience in “information & communication technology (ICT)”. This study was carried out with the purpose of establishing a benchmark for the degree of “information & communication technology expertise possessed by LIS professionals” employed in libraries.

LITERATURE REVIEW

This literature study covers few researches focusing on the knowledge and abilities of “LIS professionals” in the realm of “information & communication technology”. Among the many studies that have addressed this topic are the following notable ones: According to the author’s opinion, “they are part of a global world that is increasingly shaped by electronic networks and information technology” (Fourie, 2004). Librarians need to upgrade their “ICT skills” to compete in today’s information society. To address the demands of the 21st century librarians and the expectations of future employers, institutions should incorporate developing abilities in curriculum, as noted in a recent report by Cherinet (2016). In order to succeed in today’s information society; “LIS professionals” need to acquire or refine cutting-edge “ICT abilities”. For academic success in today’s world, LIS experts need to be flexible and open to learning new technologies, advanced abilities, and tools like Web 2.0. Today’s information is created and made available in both print and digital formats; LIS experts need to be well-versed in both to effectively manage these resources. Professional growth is essential for librarians, who should use the knowledge and abilities they gain in the course of doing their jobs. When doing their jobs, librarians should use the knowledge and abilities they’ve gained via continuing education. A further piece by the same author (Cherinet, 2016) demonstrates that “perpetual skill, communication skill as one of the needed talents universally in all job advertising”. The results also show that it is increasingly important to have expertise with content management and sharing technologies when applying for jobs. To paraphrase Ansari (2013): “The expanding ICT driven information services have presented difficulties for librarians and information specialists.” Another author made a related observation: “ICT skills have become increasingly important in the pursuit of degree-level education,” which has implications for how students utilize and interact with e-learning materials. The focus of ICT competence is on making effective use of technology.

Keyboarding proficiency, pupils' capacity to copy-paste, and their ability to follow directions are not the only things that matter here. Instead, according to Quadri (2015), "ICT skills are about the ability to use their knowledge of ICT to find, develop, and present information" (text, picture, number, or all of this integrated work). As a result, it is abundantly evident that "LIS professionals", in order to become a competent addition to the library, must study and adapt to a quickly changing environment and gain competences and abilities. Users and other support personnel are taught by librarians how to effectively search, navigate, and discover relevant information in a sea of data. The purpose of this research is to gain insight into how "LIS professionals in libraries use information & communication technology (ICT)" in their daily job.

RESEARCH OBJECTIVES

i. to learn how "LIS professionals" at the targeted universities gain their "IT expertise";
ii. to identify the "information & communication technology" competencies needed by "LIS professionals" to deliver "library & information services" in an electronic manner;
iii. to take a look at how well "LIS professionals" can use technology to collaborate while providing "library & information services";
iv. LIS specialists at academic libraries employ a wide range of "information & communication technologies (ICT)" to carry out their work;
v. to learn how often "LIS professionals" take part in "CPD (Continuing Professional Development) courses"; &
vi. in order to improve the libraries within consideration, we need to recommend next generation ICT abilities.

DISCUSSION

The discussion carried out in this section is based on the previous researches presented in the literature review:

Method of Selection

The extent to which a professional's standing influences their likelihood of taking part in training and networking opportunities is strongly correlated with the method of appointment. Permanent, on deputation, Adhoc, contract, and trainee are the five categories used to classify the appointment type in this research (Ajeemsha and Madhusudhan, 2014).

Cumulative Years in the LIS

In those studies, questionnaire questions focused on the respondent's professional employment history. Based on the responses, it seems that the average number of years spent working as a "LIS professional" is somewhere between ten & twenty-five. In order to compile a comprehensive data, they divided the total number of working years into four categories: shorter than ten years, 10–15 years, 16–25 years, and more than 25 years. Thirty-five percent of "LIS professionals" have fewer than ten years of experience, while 27 percent have more than twenty-five. Twenty-five percent of respondents have between sixteen and twenty-five years' worth of experience and thirteen percent had between ten and fifteen years' worth of experience.

Qualifying Test cleared by LIS Professionals'

Fifty-two percent of those surveyed failed to pass a required qualification test. Only 40% of respondents had passed the "UGC National Eligibility Test (NET), 5% had passed the UGC Junior Research Fellow (JRF), and 3% had passed only the SET / SLET". In sum, just 48% of "LIS professionals" were successful in passing the required tests.

Academic achievements prior to Library Employment

Before becoming a member of the library, respondents were polled on their level of education. About a third of respondents did not bother answering the associated question. Twenty-eight percent of LIS professionals have either a Bachelor's or Master's degree, while just ten percent and two percent have completed only secondary school. Among LIS responders, just 13% have earned a post-professional degree, while 88% have not earned any post-library-career academic qualifications.

Education achievements gained prior to employment as "Library & information Science (LIS) professionals"

A "Master of Library & information Science (M.L.I.Sc.)" degree was held by 46% of the LIS faculty, whereas just 15% had a "Bachelor of Library & information Science (B.L.I.Sc.)". Only 5% & 12% of LIS professionals, respectively, hold the terminal degrees of "Doctor of Philosophy and Master of Philosophy in Library & information Science". The remaining 10% of "LIS professionals" have completed a "C.L.I.Sc. program", while 12% of the LIS workforce chose not to reply. They might not want to share it for many reasons.

Collaboration-Age LIS Abilities

Automation in libraries allows them to better serve their patrons. Modules in ILMS can be used for a wide range of library-related tasks. ILMS was created to improve the user's experience across the board of expected library regular tasks. The ability of LIS specialists to automate tasks is astonishing. The percentages are 56.7%, 50%, 50%, and 46.7% Expertise in OPAC, acquisition, circulation, and cataloguing, as evaluated by LIS specialists, has been regarded as outstanding. When asked about serial control, however, only 46.7% of "LIS professionals" said it was good. It's safe to assume that people who work in LIS have the necessary skills and knowledge to carry out automated tasks. "ICT" has resulted in shifts in library services that rely on digital media. Libraries now offer digital services to patrons. For "Email-Alert services", 41.6% of users say LIS pros are outstanding at what they do. "Document delivery service" was ranked highest by "LIS professionals" (38.3%), followed by "e-reference service" (35%) and "automated services (SDI 33.3% and CAS 31.7%)". Since 31.7% of people said they don't know much about "Web-based Information services", it's clear that "LIS professionals" have some learning to do in this area. It has been said that "Computer hardware is the collection of physical elements that constitute a computer system (study.com, 2016)". "Desktop proficiency" is highest among "LIS professionals" (51.7%), followed by "pen drives" (46.7%), "tablet computers" (41%) and "external removable hard drives" (41.7%). A percentage of 41.6% LIS experts report not being familiar with "PDA". Consequently, "PDA competency" is a must for LIS personnel. In its broadest definition, an "operating system (OS)" is any piece of software that facilitates the execution of other programs on a computer. While it is feasible for software to communicate directly with hardware, "most applications are written for an OS so that they can share resources and focus on their core functionality rather than the nitty-gritty of the hardware on which they run (Techopedia, 2016)". Only half of "LIS professionals" rate their familiarity with "Windows 10" as excellent, while "Mac OS" leads the pack in the unknown category with 51.6%, followed by "Linux" (45%) and "UNIX" (43.3%). Professionals in the LIS field should acquire a deeper understanding of "operating systems (OS) such LINUX, UNIX, and Mac OS". Some of those polled also claimed to be "Windows 7 experts".

ICT Tools

The level of skill & comfort the "LIS professional" has while working with automation programs. After receiving approval ratings of 45 percent, the "LibSys software"

is the one that is considered to be the best by “LIS professionals”; “Koha” received approval ratings of 36.7 percent. A similar investigation was carried out by “Seena and Pillai (2014)”, who came to the conclusion that “LibSys” is a serviceable piece of software. The LIS experts had a very pessimistic outlook on their abilities to work with different kinds of software. “VTLS, NewGenlib, SOUL 2.0, Netlib, and Troodon” are all terms that the majority of LIS professionals (53.4% of the total) are unfamiliar with. Because of this, personnel in the LIS sector need to be proficient in the application of “ILMS”. Because “KOHA & NewGenlib” are not considered to be commercial software, it is very necessary for LIS experts to acquire competence with these tools in order to provide customers with the greatest user experience possible. The objective of an “IR” is to archive and disseminate an institution’s research and other creative works in digital formats that can be accessed from any location in the globe. This will make the institution’s research and other creative works more readily available to the general public. The phrase “digital library’ can be utilized in a variety of contexts. There is a rating of good “Dspace competency” held by 33.3% of LIS experts. “LIS professionals” have a low degree of knowledge with a variety of digital library software, including “Ganesha (used by 56.6% of them), Fedora (used by 55% of them), E-Prints (used by 38.3% of them), and Green Stone (used by 35%)”. They do not have the necessary education or expertise in digitizing software, which is expected of “LIS professionals”. In order to “help in the monitoring of the behaviour, activities, or other changing information, usually of people for the purpose of influencing, managing, directing, or protecting them”, “electronic security and surveillance systems such as RFID, CCTV, Biometric, and Burglar alarm” are absolutely necessary (“Gupta and Madhusudhan, 2017”). Among “LIS professionals”, 51.6% thought that barcodes were excellent, whereas 45.6% thought that “RFID” was good, and 28.3% thought that “QR codes” were good. However, the LIS community has shown that it is proficient in CCTV, with forty percent of ratings falling into the ‘excellent’ range. The “Access Control system” was the one that “LIS professionals” were the least familiar with (51.6%), followed by the “Burglar System” (46.6%), the “Electromagnetic system” (36.6%), “Smart card technology” (35.1%), “biometric technology” (33.4%), and the “QR code” (28.4%). “Training in electronic security & monitoring” is something that would be beneficial for the LIS community as a whole.

CONCLUSION

Because of this research, we now have a greater understanding of how “Library & Information science (LIS) professionals” at the libraries we investigated have grown their

“ICT skills & capabilities”. According to the findings, the majority of LIS employees possess the knowledge and skills essential to effectively run libraries, including an understanding of how to use computers. Automation is an area in which professionals in the field of “library & information science (LIS)” excel, but they frequently fall short in other areas of “information & communication technology (ICT)”, such as “operating systems, IR tools, bibliographic standards, electronic security and surveillance, cloud computing, AI, Web 2.0 tools, Mobile based library services”, and so on. This illustrates that “LIS professionals” need to continue learning and strengthening their talents in the aforementioned areas in order to give successful and effective services without wasting the time of the users, which is compatible with the “fourth law of Ranganathan’s theory”, which states, “Save the time of the user.” If “Library & Information science (LIS) professionals” do not make the effort to improve their “Information & Communications Technology (ICT) skills”, they will not be equipped to handle the challenges posed by the technology-driven world of today. In this instance, the “LIS professionals” showed their support for the “CPD activities” and thought that taking part in “CPD” would improve their capabilities with regard to “ICT”. This was the case despite some limitations brought on by funding constraints and other institutional impediments. The findings of this research can be implemented in the context of the contemporary library, which stands to benefit in two ways as a result: (a) “LIS professionals” will be able to better prepare themselves to compete in the digital environment; and (b) “LIS professionals” will be better able to adapt to the changing needs of their patrons by learning how to use “Information & Communication Technology”. Both of these benefits will be realized in the modern library setting. “LIS professionals” will need to learn new skills and keep their old ones up to date in order to prosper in this technologically driven age of transition and continue to offer “high-quality ICT-based services” to the user. Because they operate in an industry in which technological advances are always being made, “LIS professionals” have the responsibility of keeping their knowledge and skills up to date. In this study, we investigated the relationship between a librarian’s level of technical skill and the efficiency of the library that they oversee. As a result of the findings of this study, future “LIS professionals” will be able to utilize this research as a launching point to evaluate their own requirement for “ICT skills”, make appropriate modifications, and achieve greater levels of productivity.

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