Library Progress International *Print version ISSN 0970 1052*
Vol.43, No.2, Jul-Dec 2023: P.2077-2088 *Online version ISSN 2320 317X*

Original Article *Available online at www.bpasjournals.com*

Competencies of LIS Professionals in Engineering Colleges of Karnataka in Automating their Library

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How to cite this article: Basawaraj Malipatil, Dr Dharam Vir Singh (2023). Competencies of LIS Professionals in Engineering Colleges of Karnataka in Automating their Library. *Library Progress International,* 43(2), 2077-2088

Abstract: In today's society, one of the most significant buzzwords is information and communication technology, or ICT. Our way of life and society have been transformed into the Information Society. In order to process, save, and retrieve information more quickly and efficiently, ICT—which includes computers and communication technology—has been incorporated into every aspect of life. Education facilities now use information and communication technology for online education, instruction, and research cooperation, as well as for the introduction of innovative teaching and research methodologies. Investigating the ICT proficiency of LIS professionals employed by Karnataka engineering college libraries and drawing conclusions for library improvement are the goals of the research. A structured questionnaire was used in the survey approach to get data from the participants in this research. Through the consortium, these connected colleges have access to a substantial amount of digital and printed content, as well as subscription e-resources and technological platforms that support the university's and colleges' teaching, learning, and innovation initiatives. A structured questionnaire was issued to 128 libraries at engineering colleges in order to gather information; 102 (79.69%) of these librarians got the questionnaire properly completed and with all the pertinent information required. It was found that 13.73% of the libraries lacked automation for a variety of reasons, including insufficient computer facilities, budgetary constraints, a shortage of skilled personnel, and a weak collection. The automated libraries of engineering colleges in Karnataka were the exclusive focus of the research, which provides a status picture of the software packages used by various libraries as well as the librarians' and library staff's opinions about the program's performance. To determine the state of the software and associated issues that engineering college libraries in India confront, no thorough national or local study has been carried out. Although the present research only looks at libraries in the state of Karnataka, its findings may be applicable to the whole nation and should be helpful in identifying difficulties and challenges with library software.

Keywords: -Information and Communication Technology (ICT), LIS Professionals, Software Packages, Karnataka, Engineering Colleges, Digital Form, Librarians and Library Staff ,E-Resources.

"In engineering institutions, LIS professionals must go beyond traditional roles and become facilitators of digital knowledge systems."

———Adapted from Dr. C.R. Karisiddappa.

I.INTRODUCTION

The changing environment of library and information science need exposure, education, and training appropriate for both the domestic and international markets. The field of library and information services is more affected by computers than other fields . Rapid advancements in modern technology have altered how libraries operate. Although computer technology has the potential to boost productivity, this promise is rarely fulfilled because of the low skills of computer users. New expectations are placed on professionals by the responsibilities that librarians play in meeting the needs of an educated user communities.

In the knowledge age, the focus is on developing fundamental knowledge and abilities to provide the highest calibre of library and information services, as well as the ability to appreciate the value and significance of library information services to the community. In actuality, a person's computer literacy abilities and competences determine how well they utilise computers, and a LIS professional who is computer literate will be better equipped to convey information.

The environment of libraries has evolved significantly during the last several decades in terms of services, organisation, and collection. Online and offline e-resources have taken up a significant amount of space in library collections, transactions involving library items are entirely automated, libraries are offering new web-based services to encourage user engagement in system and service redesigns, and so on. The primary cause of these changes is the growth and influence of information and communication technology (ICT) in libraries, which has revolutionised many facets of society. Libraries are using ICT tools and services to better manage their operations and meet patron needs. The management of contemporary libraries, particularly academic libraries, requires library and information workers to have sufficient ICT skills in this evolving library environment. To provide patrons better library services, they must continuously learn and develop their abilities in the rapidly evolving field of information and communication technology.

In the era of the Internet, information has been spreading far more quickly in almost every sphere of endeavour, but especially in science and technology. The number of users has grown proportionately with the amount of information. As a result, library employees now have a greater obligation to ensure that all patrons get pertinent information and documents in the quickest feasible time and in an appropriate manner. The library must use precise equipment or tools to process this massive volume of data effectively by mechanisation or "automation." Automation of library operations offers services in a highly effective, efficient, inexpensive, and timely manner.

Since the beginning of time, libraries have been essential to the advancement of civilisation and are recognised as service-oriented institutions that meet the information requirements of their patrons. The bulk of transactional and other significant services are now provided digitally or electronically by Library & Information Science (LIS) professionals due to the introduction and integration of Information & Communication Technology (ICT) into different library operations. A university's academic library is thought of as its beating heart, serving as a vital resource for its many academic requirements, including research, teaching, and learning.

As a result of the introduction and application of diverse ICT techniques in a variety of fields, libraries of all kinds are additionally discovering it to be a valuable tool for meeting user needs by improving transaction efficiency (information gathering, organisation, storage, retrieval, and distribution) and environmental security. As a result of the development of ICT application libraries, LIS professionals now provide both print and electronic and ICT-based information services, which has altered our approach to user support.

With the shift in information distribution and access patterns from conventional to digital ways, people may now get information quickly. LIS professionals need to be trained in the use of a variety of ICT tools, such as automation, bibliographic standards, ICT-based services in libraries, web 2.0 skills, mobile information services, ILMS, Citation, IR, etc., in order to carry out their responsibilities effectively in the face of digital transformation. For LIS professionals to become effective assets for the company, they must learn and adapt to a quickly changing environment by gaining a variety of ICT skills .

Information literacy is just the ability to understand information about information. A collection of abilities centred on the use and investigation of information is referred to as information literacy. Therefore, library professionals should learn how to access and use the many different types of data sources, information and communications technology, search strategies, and e-resources in order to successfully meet the users' complex information needs.

Information literacy is one such possible instrument that empowers the students, and library professionals, who serve as information suppliers and facilitators, should function as library managers to lead and educate the student body for self-sufficiency and independent study. The environment of libraries has evolved significantly during the last several decades in terms of services, organisation, and collection . Online and offline e-resources

now make up a significant portion of the library collection, transactions involving library items are entirely automated, libraries are introducing new web-based services to encourage user engagement in system and service redesigns, and so on .

These changes are mostly the result of the growth and influence of information and communication technology (ICT) in libraries, which has radically altered every aspect of life. The use of ICT tools and services in libraries helps them run more effectively and appropriately meet patron needs. Library and information workers need to be well-versed in ICT in order to administer contemporary libraries, particularly academic libraries, in this evolving library environment. In order to provide patrons better library services, they must constantly learn new information and skills about the rapidly evolving field of information and communication technology.

Libraries may now provide their patrons with access to both local and out-of-town library catalogues in addition to the relevant information that is accessible inside their own libraries thanks to the development and application of information and communication technology (ICT). Beginning in a few specialised libraries in the late 1970s, library automation has now spread to the majority of university libraries in India . In order to support raising the standard of education, libraries and information centres now have a larger obligation to provide their patrons up-to-date, [16], relevant information. Without an effective library and information systems at each institution's disposal, this cannot be accomplished. Complex computer programs and library automation systems need a high level of programming expertise in addition to a thorough understanding of the standards and functional requirements of libraries. Software technologies utilised in library automation solutions include search engine science and technology, client-server architectures, database management systems, and, more and more, web-based application programming.

II.LITERATURE REVIEW

Talawar, V. G. (2009) The purpose of this research is to examine engineering college libraries that have automated their services and operations. The experiences that engineering college librarians had when they computerised their library operations will thus be implicitly examined in this study. Additionally, it was noted that 13.73 percent of libraries lack automation for a variety of reasons, including a lack of computer facilities, budgetary constraints, a shortage of skilled staff, and a small collection. The automated libraries of Karnataka's engineering colleges are the exclusive focus of this investigation. It displays the software packages that are currently being utilised by various libraries. Librarians' opinions about the functionality of the various software modules they have used. Library automation in India started in a few special libraries in the late 1970s and has since spread to the majority of university libraries. Due to a number of issues, it has not yet gained traction in Karnataka college libraries. Few studies on library automation have been conducted in India, compared to the large number conducted in the West. This study attempts to determine the current condition of library automation in Karnataka state's engineering college libraries.

Kemparaju, T. D. (2017) Libraries and their collections provide the necessary support for the use and subsequent expansion of knowledge, which benefits both the institutions in question and the generations in general. Studying the various library automation areas in Karnataka's engineering college libraries, as well as the types and types of software, including open-source software (OSS), that are used in these libraries, and the areas where open-source software is applied in these libraries are the goals of this research.147 engineering college librarians in the state of Karnataka were surveyed by the inquiry on the aforementioned topics. OSS Installation and Staff Knowledge, Library Facilities Provided, OSS Use, Reasons for OSS Use, Benefits of OSS, Areas of Library Automation, Use of OSS in Engineering College Library Services, Status of Library Automating tasks, Use of Commercial usage Library Automating Software, and Satisfaction with OSS Library Applications are some of the categories that are used to discuss the results.

Manjunatha, K. V. (2011) In India, the state of Karnataka has become one of the leading states in the establishment of several engineering colleges and institutes. These institutions were established with assistance from the public and private sectors. As a result, more individuals are working in technical fields doing research and providing training and instruction. Several libraries have been developed to meet the information demands of those doing academic study.

Talawar, V. G. (2010) Library automation in India started in a few special libraries in the late 1970s and has since spread to the majority of university libraries. Due to a number of issues, it has not yet gained traction in Karnataka college libraries. Though few have been conducted in India, several research on library automation have been conducted in industrialised nations. The engineering college libraries in Karnataka that have computerised their operations and services are surveyed in this research. The research is restricted to Karnataka's engineering college libraries that are automated. It provides information on the software programs that the different libraries utilise as well as the librarians' assessments on the functionality of the various software module they have used.

Selvaraja, A. (2012) There are almost thirty academic and research libraries in Mysore city. Only 23 libraries have been selected by the researchers for the study. Seventeen of the twenty-three libraries have computers. Only fourteen of these seventeen libraries have automated their operations. The researchers have addressed a number of library automation-related topics in this study. The libraries that haven't automated have explained why they haven't started the automation process yet. In order to share information, many libraries have network connections. The networking programs MYLIBNET, DELNET, and INFLIBNET are used by the libraries. Professional and semi-professional staff members do data entry tasks at many libraries.

Nashipudi, M. B. (2022) The study covered in this article is on the automation initiatives now taking place in Karnataka's Government First Grade College (GFGC) Libraries. Colleges and their libraries face a variety of challenges, which are mostly related to automation software, IT infrastructure, library automation obstacles, the need of automation training, and other concerns. Additionally, the INFLIBNET N-LIST subscription was assessed in this research. The results of this investigation will be useful in formulating a strategy for the consistent execution of the library automation project across all of Karnataka's academic libraries. The research can't be applied to all of Karnataka's academic libraries since it is restricted to the GFGC Libraries. The purpose of the Google Form was to gather the necessary information to meet the study's stated goals. Following export, the data was tallied, examined, and analysed in Excel.

Divyananda, K. (2018) Technology has impacted the library system's core. It is now clear that technology-enabled practices and services are gradually gaining importance while traditional library processes and services are gradually fading into the background. The research examined how Karnataka's autonomous engineering institutions have used technology to highlight excellent practices and services. It has been discovered that libraries are adept at implementing technological best practices and offerings. To increase their performance, the research advised libraries to be proactive and upgrade their technology on a regular basis, seize the chances presented by new developments, and combine technology with creative services and best practices.

Naik, R. R. (2013) As information and communication technology (ICT) has improved, library personnel now need to have sophisticated ICT abilities in addition to specific management competences. Library professionals require a variety of management competencies to oversee all of these technologies and approaches, as well as subordinate personnel and library operations. The purpose of this study was to assess the managerial and information technology (ICT) skills of library professionals with various titles (such as librarian, deputy librarian, assistant librarian, and library assistant) employed by engineering college libraries connected to Visvesvaraya Technological University, Belgaum (VTU) in the Indian state of Karnataka.

Nagesh, R. (2016) In the subject of library and information science, and library automation specifically, the expansion and advancement of information and communication technology (ICT) is crucial.The current study illustrates the state and issues surrounding library automation in Hassan district's government first-grade colleges. According to the survey, just 23% of libraries are automated, and the primary issues with library automation include a lack of infrastructure, staff training, funding, and staffing levels. Additionally, this research provides a status picture of the software packages that libraries and library automation modules employ. According to the survey, 14 (82.35%) of the 17 libraries are adopting e-granthalaya; some of these libraries are in the early stages of development, while others are just half finished. Furthermore, Easy Lib Software is used by around three (17.65%) universities.

Ramasesh, C. P. (2014) The primary driver of change is technology. The facilitator is the one who overcomes the conditions that cause delays. Information services have constantly been extended with the use of ICT, or

information and communication technology, and its tools. In a higher education system, they have altered the ways in which research, teaching, learning, and extension activities are conducted. The information technology (IT) infrastructure facilities that are available in Karnataka's engineering colleges have the potential to change the image of librarians and provide better and more enhanced information services. Because of a lack of funding and management gaps, most libraries lack basic and advanced IT infrastructure amenities and amenities, according to a study done to evaluate the availability of IT infrastructure among the 133 engineering colleges at Visvesvaraya Technological University. Additionally, comparison is conducted across institutions to evaluate the ICT-based resources offered in private and government-aided college of engineering librarians.

A. Objectives of the Study

- To evaluate the existing degree of automation in Karnataka's engineering institutions' libraries.
- To determine the technical, managerial, and soft skills that LIS professionals must possess in order to effectively automate libraries.
- To determine the factors that impact the choice of library software.
- To examine the library automation-related professional development courses and training options offered to LIS professionals.
- To investigate the difficulties LIS professionals, have while putting library automation systems into place and maintaining them.

III.METHOD

Questions and answers, interviews, and in-person visits form the basis of the survey. A systematic questionnaire was used to gather librarians' thoughts on library software. The questionnaire served as the foundation for the interview . The responder librarians were asked for their thoughts on several matters concerning the housekeeping operations of the library. 102 (79.68%) of the 128 engineering college libraries in the state that received the questionnaires were properly completed and included all the pertinent data that was asked for. Nevertheless, the study's geographic scope was restricted to institutions in the Karnataka state alone. Librarians who responded were asked to rate their thoughts on a five-point scale. Using a hierarchical cluster for variables, Ward's cluster approach, dendrograms, and the Chi-Square Test for data analysis.

IV.DATA ANALYSIS AND INTERPRETATION

A. Demographics Details

The professional qualifications, experience, and designation of the respondents have a significant impact on their professional abilities and competences. The current research makes an effort to gather information on this, which has been tabulated.

Table 1 Distribution by gender (N=102).

SI No.	Gender	No. of Respondent	Percentage
1	Male	54	52.94%
2	Female	48	47.05%
	Total	**102**	**100%**

Table 1 indicates evident that, of the total respondents, 52.94 percent were men and the remaining 47.05 percentage were women.

Table 2 Age-based classification of the respondents.

SI No.	Age Group	No. of Respondent	Percentage
1	25-35 Years	48	47.05%
2	36-45 years	22	21.56%
3	46-55 years	19	18.62%
4	56<	14	13.75%
	Total	**102**	**100%**

18.62% of librarians at engineering colleges are between the ages of 46 and 55, and 21.56% of libraries are among the ages of 36 and 45, according to the survey. Table 2. Of librarians, 47.05% are between the ages of

25 and 35, while just 13.75% are older than 56 [28]. It attests to the fact that the senior library staff are employed by the College of Engineering libraries in question.

Table 3 The educational background of respondents.

SI No.	Respondent by Designation	No. of Respondents	Percentage
1	Sr. Librarian	05	1.59%
2	Librarian	66	53.96%
3	Asst. Librarian	32	29.69%
4	**Total**	**102**	**100%**

According to Table 3's research, of the respondents, five have the title of Senior Librarian (1.59%), sixty-five have the title of Librarians (53.96%), [29], and thirty-two have the status of Assistant Librarians (29.69%).

Table 4 Professional Education Background of Respondents.

SI No.	The greatest level of professional expertise	No. of Respondent	Percentage
1	BLISc	22	19.68%
2	MLISc	15	9.69%
3	Ph.D.	09	6.59%
4	M.Phil.	56	43.96%
	Total	**102**	**100%**

Table 4 shows the professional qualifications of the respondents. Of the 102 respondents, 55 (43.96%) had an MLIS degree, followed by BLIS (19.68%), M. Phil (6.59%), and Ph. D. (6.59%).

Table 5 Professional Experience of Respondents.

SI No.	Experience	No. of Respondent	Percentage
1	1- 5 years	27	19.69%
2	5-10 years	14	13.32%
3	10-15 years	52	49.69%
4	15 years and above	09	6.5%
	Total	**102**	**100%**

Similar to this, Table 5 demonstrates that 52 out of 102 respondents (49.69%) had five to ten years of employment experience. Professional experience of ten to fifteen years, one to five years, and more than fourteen years comes next, accounting for 13.32%, 15.93%, and 6.5% of the overall.

B. Information about the Surveys Sent to Librarians and the Answers Obtained

102 completed replies from Karnataka engineering college librarians made up the core data for analysis and interpretation in this research [30]. Table 6 shows the distribution of responses.

Table 6 Information about the survey sent to librarians and the answers obtained.

SI No.	Types of collages	Number of questionnaires mailed forward	Number of questionnaires received	Percentage of Reponses
1	Govt. colleges	1	1	0.0967.96
2	Private aided colleges	12	8	7.98
3	Private unaided colleges	98	77	3.96
4	University constituent colleges	4	3	10.99
5	Minority institution	13	15	3.59
	Total	**128**	**102**	**100.00**

C. The Automated Status of Libraries in Engineering Colleges

Offering its customers new and enhanced services might be made possible via automation. Acquisition, cataloguing, categorisation, circulation, serials control, bill payment, budgeting, reminders, and reference services are all automated library operations [31].Table 7 displays the current state of library automation at Karnataka's engineering institutions.

Table 7 Library automation's current state in engineering institutions.

SI No.	Status of Library Automation	No. of Respondent	Percentage
1	Automated	87	(46.89) %
2	Not Automated	15	(7.98) %

87 (46.89%) of the 102 respondent libraries are automated, whereas the remaining 15 (7.98%) are not, according to Table 7.

D. The Selection of Library Software Influence Factor

Librarians must take certain steps before choosing library software for automation. Tables 8 and 9 provide a summary and presentation of the influencing variables.

Table 8 Influential factors in choosing the library software.

SI No.	Reason and measures	No. of Librarians	Percentage (N=88)
1	Assessment of every module	56	63.95
2	Observing the software demo	49	54.96
3	By other college librarians' recommendations	50	53.69
4	Approaches from vendors	43	51.49
5	Software that is cost-effective	43	50.96
6	Origin-based software	39	43.96

According to the above table, 56 (63.95%) of the respondents provided an influencing factor when choosing the library software to evaluate each module. After seeing the program demo, 49 (54.96%) of the respondents chose their library software. The other college librarians recommended 50 (53.69%) of the respondents [32]. Forty-three (51.49%) respondents chose their library software using a vendor strategy, whereas forty-three (50.96%) respondents chose the software that was already in their library due to its cost-effectiveness. The program was chosen by 39 (43.96%) responders due to its origin.

Table 9 Choosing library software.

SI No.	Reason and measures	No. of Librarians	Percentage (N=88)
1	Assessment of every module	70	35.69%
2	Observing the software demo	14	7.96%
3	By other college librarians' recommendations	4	2.59%
	Total	**88**	**100.00**

According to the table above, 70 (35.69%) of the responding libraries had their librarians choose their library software, while 14 (7.96%) had the principal choose it. Four (2.59%) respondents believed that the management had chosen their library programs.

E. The Library's Reasons for Not Automating

A vital initial phase in providing consumers with improved services is library automation. The researcher questioned 14 libraries that have not yet begun automation work about the reasons for the delays in beginning automation initiatives. The data so collected is shown in Table 10.

Table 10 Justification for not automating the library.

SI No.	Reason	No. of Library	Percentage (N=14)
1	Absence of computing facilities	15	98.69
2	Insufficient funds	8	45.96
3	The management is not enthusiastic.	7	25.69

4	Absence of skilled labour	3	18.96
5	The library's collection is quite little.	1	2.66

The table above shows that most of the 14 libraries lacked computer facilities, and 8 (45.96%) of the libraries were having financial difficulties. Nevertheless, the administration of 7 libraries (25.69%) expressed little interest in investing funds for automation. Three libraries (18.96%) are experiencing a shortage of skilled personnel, while one library (2.66%) has a negligible collection.

F. Engineering College Distribution by Region

Because more reasonably priced library software is now available, and because ILS capabilities and customisation options have increased as a consequence, engineering college libraries, regardless of location, have begun offering value-added services via their ILS. Table 11 displays the condensed data.

Table 11 Distribution of engineering colleges by region.

SI No.	Region	Geographical			Total
		Urban	Sub-urban	Rural	
1	Mysore region	36 (32.96)	8 (10.96)	6 (3.65)	50 (25.38)
2	Bangalore region	11 (12.59)	8 (9.89)	1 (3.98)	20 (21.44)
3	Belgum region	5 (6.98)	2 (8.96)	3 (1.49)	10 (5.96)
4	Gulbarga region	2 (3.96)	2 (2.96)	4 (2.96)	8 (8.95)
	Total	54 (63.98)	20 (11.98)	13 (6.98)	88 (100.00)

According to the following table, there are 20 (21.44%) colleges in the Bangalore area, of which 11 (12.59%) are urban, 8 (9.89%) are suburban, and 1 (3.98%) is rural. Six (3.65%) of the 36 (32.96%) colleges in the Mysore area are suburban, three (3.41%) are rural, and eight (10.96%) are urban. Additionally, there are five (6.98%) colleges in the Belgaum area, of which two (8.96%) are urban, three (1.49%) are suburban, [33], and one (3.98%) is rural. Lastly, the Gulbarga region has eight (8.95%) colleges, of which two (3.96%) are in urban areas, two (2.96%) are in suburban areas, and twenty (11.98%) are in rural areas. The estimated chi-square value is 22.696; P<.000 is considered significant.

G. Information on Library Software for Automation

In this study, the researcher has attempted to gather information on the software programs used by the engineering college libraries in Karnataka. Table 12 presents the analysis and presentation of the obtained data.

Table 12 Information about the automation-related library software.

Sl. No.	Name of the software	No of libraries	Percentage
1	EasyLib	30	15.93
2	Netlib	18	9.98
3	LiMS	9	3.65
4	Libsoft	7	3.59
5	In-house	5	5.59
6	Smart Campus	5	5.49
7	Ie-Lib	2	2.28
8	E- Granthalaya	2	2.27
9	SOUL	2	2.27
10	Chancellor	1	1.16
11	Pal Pub	1	1.16
12	SLIM++	1	1.16
13	Libsuite	1	1.16
14	YLAS	1	1.16
15	NewGen Lib	1	1.16
16	Lib-Manger	1	1.16
17	Libsys	1	1.16

18	IOZEN	1	1.16
	Total	**88**	**100.00**

Out of 102 libraries, 88 were automated, and of them, 29 (15.93%) used Libsoft, while 18 (9.98%) used EasyLib, according to the above data. It's noteworthy to note that five libraries (3.65%) utilise Smart Campus, seven libraries (3.59%) use NetLib, and nine libraries (9.09%) use in-house software. Likewise, one library (1.16%) uses LiMs software, while the next two libraries (2.27%) employ ie-Lib, E-Granthalaya, and SOUL software packages. The other software programs, which account for 23.95 percent of the total responders, are Libsuite, SLIM++, Chancellor, Pal Pup, NewGenLib, Libsys, YLAS, IOZEN, and Lib-Manager.According to the report, Libsoft is used by the vast majority of respondents for the automation of libraries.

H. Software Modules' Current Status

Automating a library entails more than just reading and inserting data; it also entails automating certain library functions. As a result, the researcher tried to gather information via automating library functional domains. The data gathered is shown in Table 13.

Table 13 Status of Software Modules in Operation.

Sl. No.	Modules	No. of colleges	Percentage (n=88)
1	Administrative module	88	100.00
2	Curriculum	88	100.00
3	Catalogue	23	36.98
4	OPAC	22	94.89
5	Web OPAC	19	38.98
6	Acquisition	88	100.00
7	Serials control	19	21.89

The administrative, cataloguing, and circulation modules in the respondent libraries are all operating at 100% capacity, as shown in Table 13 [27, 29]. Twenty-two (94.89%) libraries use WEB OPAC module functions, whereas 88 (100.00%) libraries use OPAC modules functions. Serials controlling modules are used by 23 (36.98%) libraries for automatic module operations such as acquisition [33]. It is being used by 19 (21.89%) libraries. The causes can be linked to the various procedures that respondent libraries used.

V.FINDINGS

1. In addition to nine libraries experiencing financial difficulties, it was noted that fourteen libraries lacked computer equipment. The administration of six libraries also had little interest in investing funds in automation. Only two libraries had a shortage of skilled staff, and their collections of documents were woefully insufficient.

2. It was discovered that a large number of colleges in Bangalore and the surrounding cities were automated as a result of the existence of IT-influenced institutions; as a result, there is fierce rivalry for admission to these universities.
3. Before choosing software for their library, librarians should study several automated libraries to share experience.
4. Before choosing library software, librarians need to assess each module by obtaining a system demonstration.
5. Librarians should choose software for their parent institution based on cost efficiency.
6. The views of library employees and patrons should be taken into account when choosing local or international software, or when creating software internally, in order to provide the highest level of user satisfaction and efficient services.
7. Among the available resources, standard library software should be selected to enable data sharing across libraries via computer networking, which may be useful for resource sharing in the future.

8. Local software is used by the majority of libraries. It is evident that among responding libraries, Libsoft accounts for the vast majority of installed and used applications.
9. The engineering college libraries' comments showed that the cataloguing and circulation modules were the most popular among the participants.
10. Library employees must react to technological advancements on several levels in order to be included in the process of developing library information systems. They must stay up to date on the latest technological advancements, assess them so they can make well-informed decisions about their use, and create workable plans for putting them into practice.
11. Improving the library automation system and staff members' core competencies not only improves their professional skills but also prevents other information providers from entering the information profession.

VI.CONCLUSION

The purpose of this study was to investigate how well integrated library software is used in Karnataka's engineering college libraries. The researcher sent 128 questionnaires to the librarians at the engineering colleges; 102 (79.69%) of them answered, providing all the pertinent information that was asked for. According to the study's results, Karnataka's engineering institutions' libraries employ a broad range of software. Many of the Bangalore region's libraries were automated, according to the trends of successful usage of integrated library software in the chosen field of study. This may be because the authorities are in fierce rivalry to get students to their universities. For those regional institutions who have not yet automated their library operations, it is recommended that they embrace Open-Source Software (OSS). According to the report, the vast majority of private, unaided institutions in Karnataka should take into account the librarians' opinions while choosing library software. OPAC, acquisition, categorisation, and circulation with barcode assistance are the most often automated tasks by the responding libraries. Bill payment, Web-OPAC, references, reminders, and serials management are some of the other automated features that aren't utilised as often. Although the other features are crucial for utilising integrated library software effectively, this can be because various organisations have different processes and structures.

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