ESTABLISHMENT OF ENGINEERING LIBRARIES

Author 1-   **DR SHRIGOPAL SHRIVASTAVA**

LIBRARIAN

GOVERNMENT GIRLS P.G. COLLEGE REWA M. P.

Author 2-   **AADESH KUMAR SHRIVASTAVA**

CIVIL ENGINEER, REWA M.P.

ABSTRACT

In order to achieve the goals, the college library's primary duties are to support and facilitate academic research and works. It supports the reading needs and demands of the college's teachers and students in their pursuit of knowledge. The college library offers the books and documents required for research, learn and grow. Technical libraries acquire books, journals, magazines, references, algorithms, tables, charts, audio video lectures and many more on engineering and related topics because users are the main actors in the information system. To achieve the goal of librarianship, which is to deliver precise, timely, expeditious, and accurate information to the right reader at the right time at the right place, library staff at the engineering institute spend enormous sums of money and collect various pieces of recorded information in printed and electronic forms. These well-stocked libraries offer ICT services in addition to their print and electronic resources. Therefore, it becomes important to carry out a study on how these libraries are used.

KEY WORDS- *Engineering Libraries, Modern Technical Library, Engineer Librarians, Engineering digital library, ICT in libraries.*

INTRODUCTION

According to Webster's Dictionary, "A University is an institution of higher learning providing facilities for teaching and research and authorized to grant academic degrees."

The current wave of social progress, many of which have had a direct impact on the role and use of libraries, can be attributed to higher education institutions. The library at a higher education institution has always been seen as a collection of publications and a reliable source of information. Before the late 20th century, when rapid advancements in innovations of electronic correspondence and data recovery practically compelled libraries to adopt a different structure for disseminating and delivering information to students and employees, this work had remained mostly unchanged.[1]

One of the world's top source of engineers is India. There are many engineering institutions in India that offer undergraduate and graduate programmes in, engineering, architecture, designs, and many more technical things. A programme offering the knowledge and skills necessary in the industrial and service industries is referred to as technical education. In the past 20 years, India's technical and management education sector has experienced enormous expansion. India has the second-largest educational system in the world, behind China. The government of India's Five-Year Plans, which placed a strong emphasis on education, contributed significantly to the extraordinary growth of technical education.[2]

ENGINEERING EDUCATION IN INDIA

The Indian government recognised the importance of providing technical education in light of anticipated economic and industrial expansion. Engineering and technical institutions were either renovated or newly established as a result of the University Education Commission's recommendations. In order to provide top-notch engineering education, the central and state governments established the Indian Institute of Technology and Regional Engineering Colleges (now NIT). There are many centrally controlled and state-run

---

[1] Nagesh and Mirza, Role of Libraries in Higher education, page no 152-163
[2] Khatri and Mulla, Planning of libraries in India, page28-32

engineering colleges. Few private engineering institutes were founded in the 1980s as a result of the rise in demand for engineering education. [3]

After high school, engineering is the most popular choice for many pupils. As a result, there is fierce competition for admission to prestigious colleges. Such an institution's entrance examinations are quite challenging. More than half of engineering graduates come from self-financing private colleges, which are proliferating due to the high demand for engineering education.

The All India Council of Technical Education (AICTE), an apex body at the national level, was founded in 1945 to provide the Indian government with technical education-related advice. India has 8997 engineering and technology colleges with 2.9 million students enrolled, according to the HRD ministry. Currently, there are 617 engineering institutes in Madhya Pradesh alone[4]. India's engineering colleges are expected to grow by 20 percent annually. The five Indian states of Tamil Nadu, Andhra Pradesh, Maharashtra, Karnataka, and Kerala account for 69% of the country's contribution to engineering education, compared to a meagre 14% from Uttar Pradesh, Bihar, Gujarat, Rajasthan, and Orissa.

ENGINEERING LIBRARY

According to Satyanarayana, K (1997)4 "A Library of technical / engineering college or polytechnic can be classed as a special library". Similar to other academic libraries, technical libraries associated with engineering institutions collect, organise, preserve, and disseminate information and knowledge. Engineering libraries provide services for a variety of customers, including undergraduate and graduate students, faculty (teaching and non-teaching), and researchers. Engineering libraries acquire books on the subject of engineering and associated fields. These libraries serve as knowledge repositories or information hubs that offer both traditional printed materials and information services as well as ICT-based library resources and services. The DELNET network, online databases including IEE, ASCE, Science Direct, ASME, Springer, and N LIST Resources (via INFLIBNET), as well as the NPTEL facility to

---

[3] Sohail, Md & Mazoom Raza, M. (2012). "Measuring Service Quality in Dr. Zakir Husian Library, J.M.I. New Delhi: A Survey". Library Philosophy and Practice (ejournal), 802. doi:http://digitalcommons.unl.edu/libphilprac/802
[4] AICTE Approved Institutes for the Academic Year: 2021-2022 - `Madhya Pradesh https://facilities.aicte-india.org/dashboard/pages/dashboardaicte.php

view video courses, are now being subscribed to by these libraries for resource sharing reasons (National Programme on Technology Enhanced Learning). These libraries now have the pro-active, dynamic, involved, participatory, and interpretive qualities.[5]

They offer a lively setting for academic work and act as a centre for learning. The majority of study commissions and review committees have stressed the value of libraries in higher education. To name a few, the Kothari Education Commission (1964-66), the Radhakrishan Commission (1948), the Sadler Commission (1917), the University Commission (1902), the Hunter Commission (1882), and the University Commission (1902) all advocated for the development of libraries in educational institutions and provided guidelines for the minimum infrastructure that should be provided in libraries in higher educational institutions.

Electronic resources are growing alongside traditional materials in modern libraries, especially in engineering college libraries for a variety of reasons. Libraries today should place more emphasis on information access than information availability. Libraries employ a variety of techniques and policies to provide simple access to information. The measures include: how books, journals, magazines, and other materials are arranged on the shelves; the number of copies available for the same title; print and electronic resource collections in the library; assistance and maintenance at the digital library; accessibility of electronic resources from my college or home (remote login); the layout of the library's website; the ability of the user to find information; and facsimiles of the materials (current awareness services), Information is posted on notice boards and kept up-to-date, and the library's technology (computers, photocopiers, printers, information on new arrivals, employment news, event posters, circulars, etc.) is in good working order.

Every successful engineering school recognises the library's essential function as well as others. Libraries work hard to inform their users and to promote scholarly pursuits and lifelong reading habits. The following goals guided the establishment of engineering college libraries:

---

[5] Belsare, S.D. (2012-2013). Development and management of engineering college libraries in Western Vidarbha region: an analytical study. (Doctoral Dissertation). Shri Jagdish Prasad Jhabarmal Tibrewala University, Vidyanagari, Jheenjhunu, Rajasthan. Retrieved 9 Feb, 2015 from http://www.shodhganga inflibnet.ac.in

- Maintaining knowledge

- Information dissemination

- Added assistance with research

- Support for clients, particularly those pursuing technical degrees

Any engineering college library's resources can be roughly divided into two categories: print formats and electronic versions. The examples of printed formbooks, printed periodicals, back issues of periodicals, question papers, reports, etc. are as follows. Many engineering college libraries now purchase electronic resources in addition to print forms due to the development of information and communication technology. The libraries also make use of e-resources to meet user needs. Obtaining electronic resources like eBooks, e-journals, e-databases, audiovisual materials, etc. has proven crucial. Many libraries create a consortium in order to share purchasing power and overcome financial limits. Engineering college libraries are also outfitted with the most recent IT infrastructure to disseminate data from the library's electronic resources.

All engineering institutions offering undergraduate and postgraduate programs must subscribe to certain e-journal packages.-

S. No	Publisher	Subject Areas
1	IEEE	Computer Engineering + Computer Science + Electrical and Electronics Engineering + Telecommunications and related disciplines
2	Springer	Electrical and Electronics and Computer Science Engineering
	Wiley-Blackwell	Computer Science + Data System+ Telecommunication and related Discipline
3	ASME	Mechanical Engineering
	Springer	Mechanical Engineering

	Wiley-Blackwell	Mechanical, Electrical and Electronics Engineering
4	ASCE	Civil Engineering
	Wiley-Blackwell	Civil Engineering
5	McGraw Hill	General Engineering and Reference
6	J-GATE	J-GATE Engineering and Technology (JET)
7	ELSEVIER	Engineering + Comp Sci (Electrical+ Electronics + Mech + Civil and Structural+ Aerospace + Biomedical + Industrial and Manufacturing + Ocean Engg + Computational Mechanics and Safety Risk, Reliability and Quality + Comp Network and Comm., Artificial Intelligence, Computer Science, Computational Theory and Mathematics, Computer Graphics and CAD, Info Sys Control and System Engg and Software
8	ASTM DIGITAL LIBRARY (DL) ONLINE VERSION	Online dictionary of Engineering Science and Technology, Electrical & Electronics Engineering Mechanical Engineering, Civil, Metallurgical, Petroleum, Instrumentation

STRUCTURE OF MODERN ENGINEERING LIBRARY

At present there is no any particular structure of libraries with special reference to any technical or engineering institutions, but it is the dire need of the present hour to make and interpret the basic structure of engineering libraries. The detailed study of various published researches and materials shows many of the important things which is to be included in the basic structure of the libraries of engineering and technology. A college library should purchase a wide range of educational and instructional materials in order to meet the various academic and extracurricular demands of both students and professors.[6]

---

[6] Goldman, Julie, Donna Kafel, and Elaine R. Martin. (2015). "Assessment of Data Management Services at New England Region Resource Libraries." Journal of Science Librarianship, 4(1): e1068. https://doi.org/10.7191/jeslib.2015.1068

A carefully considered acquisition policy must serve as the foundation for judging the collection's quality. The Library Advisory Committee often sets this policy. Groups of specialists that are well-versed in current publications and have a thorough understanding of the literature in their respective fields of specialisation support the selection process.[7] The librarian and his or her staff should use tools for global selection to draw the attention of experts to books on a variety of topics and contribute to the development of a collection that is focused on the needs of learning and teaching.

Libraries are centres of information, activity, and technology that can be large and elaborately designed. We need to be aware of the modern library design concepts in order to establish acceptable, secure, and comfortable spaces for reading, studying, conducting research, and even socialising. There are enormous expectations today for libraries. To draw in a wide range of people, designers, architects, and engineers are collaborating to build stunning exteriors and interiors. Many of these projects emphasize engaging participants in multiple contexts, and they strive for adaptability as well as a strong feeling of place. According to structural engineers and designers there are certain heads which is need to be implemented for the effective modern library in the world of engineering and technology. Some of them are as follows-

1. Furnishings

The furnishings in engineering library will play a crucial role in enhancing the patrons' experience. the choice of furniture that will help the readers to meet their goals, whether that's facilitating connections, nurturing creativity or showing collections. there must be avoiding blocky, heavy furniture and instead using nimble furniture that can be moved around easily so that the space becomes more flexible and the library structure needs to be attractive and positive vibe space so as to develop a positive feeling of reading and learning among students. Along with this the library structure should also consider the following heads-

---

[7] Kitturand Geeta & Biradar Kavita (2017). Digital Library Initiatives: A Boon for Preservation of Information Resources in India. International Journal of Science and Research, Volume 6, Issue 1, January 2017. www.ijsr.net

- Height-adjustable desks
- Flip-top surfaces,
- Side storage bins
- Modular components
- Shelving on casters
- Moveable walls

2. Sustainability

Libraries need to be both creative and opportunistic in the current climate. Sustainable library design is part of the larger trend of sustainable architecture. There are various steps we can take to ensure that library is not a complete blight on the environment. Here are some of them.

- Minimize space usage by using an efficient and pleasing sense of space
- Use roof areas for solar panels and installation of long glass windows so that the light keeps coming in sufficient quantity and the students in the reading room get enough light and natural air.
- Maintenance-friendly construction
- Thermal insulation
- Switchable sockets for PCs and printers
- Library's ecological footprint
- Power supply from renewable energy source
- Light as required (dimmer switches, step switching) and also air conditioners so as to keep the computer areas cooler and safer for long duration uses.

3. Materialistic approach

Libraries are able to allocate less room to tangible goods as they acquire more digital resources. The contemporary library offers a multipurpose area for people to congregate and pick up new abilities. In essence, it serves as a gathering spot, a cafe, a space for digital production, and more.[8] The libraries need to be well furnished and must have reading rooms, community halls, private spaces for research and long studies, rest rooms, internet facilities, and much more. There should be availability of all size printers so as to print the all size designs, images, graphs, which is most important tool for civil engineers, designers and architects.

4. Model of engineering library must includes-

1. Information access and control
2. Arrangement of materials on the shelves (books, journals, magazines etc.,)
3. Availability of multiple copies (number of copies for same title)
4. Print and electronic resource collections in the library
5. Assistance and maintenance at the digital library
6. Library equipment - condition (computers, photocopiers, printers, Network gadgets etc.,).
7. Registers for user complaints/suggestions and facilities for response to use complaints/suggestions
8. Services and maintenance at the property counter to keep personal belongings (bags etc.)
9. Maintenance of drinking water (clean & hygiene)
10. Effective and suitable Library working hours

---

[8] K.m, P. (2018). Use of ict resources and services at state university libraries in Gujarat a study. Retrieved from: http://hdl.handle.net/10603/247168

ROLE OF ICT IN ENGINEERING LIBRARY

The library is the beating heart of every organization, academic institution, company, or private person, and it is essential for effectively distributing knowledge throughout the user community. The library has expanded in many ways to better serve the user society as a result of the increased usage of ICT. The amount of textual material that appears in different electronic formats to provide needed users with digital services is rapidly increasing in the present digital era. In order to improve the effectiveness and efficiency of their operations and services, libraries use computers (Ravichandra Rao, 1995). They also give librarians management data so they may make wise judgments. Information and communication technology (ICT) advancement and use allow libraries to provide their patrons with the required information already present in their collections as well as access the catalogues of other libraries, whether nearby and far away (Chopra, 1998). The majority of India's academic libraries currently use library automation, which first appeared in a few special libraries in the late 1970s. In the modern era, libraries and information centres have a greater responsibility to give their users access to the most up-to-date information and to help improve the quality of education in the nation, but this cannot be accomplished unless each institution has an effective library and information system at its disposal (Kilgour, 1970).[9] Therefore, as part of the overall programme of the library education system, the computerization of library facility operation should be established.

ICT has a lot of use in libraries for many different purposes. Through computer networks, it aids libraries and information centres in compiling databases of their holdings and making them easily accessible to users both inside and outside of the library. When databases are created on a computer in an automated library, numerous services, including bibliographic, indexing, current awareness, and selective dissemination of information services, are automatically generated and made available to users. Libraries may now exchange resources

---

[9] N. Murugesan and R. Balasubramani (2011), "Application of ICT Based Resources and Services in Research and Development Libraries in Tamilnadu: An Analytical Study", European Journal of Social Sciences – Volume 23, Number 1, pp.154- 161.

and services more efficiently thanks to networking, especially in these times of rising document prices and shrinking budgets.[10]

Implementing ICT tools and equipment in the information provision process as a media and technique is the major goal of ICT in libraries. ICT in libraries generally serves to familiarize patrons with how computers and other electronic devices operate.[11] ICT has made it simple and quick to obtain information sources like books, journals, newspapers, etc. The majority of publishers have websites that are accessible via the internet, and you can check their catalogues for new publications from the library. A librarian can quickly place an order online and, if necessary, get any questions answered by email. Some of the publishers also make their publications available online. Libraries are unable to deliver every piece of information to its users due to rising document costs and a lack of funding. But thanks to ICT libraries, this issue was resolved. The user may search other libraries' OPACs independently or request a specific document from the librarian. After searching it, he or she can ask that library to lend the document to another library.[12]

The ICT has made the easy access and availability of e-journals. The term "e-journal" refers to a version of the classic print or paper-based journal that is delivered electronically to the user in one way or another. Since its debut in 1965, the printed journal has remained the principal method for academics and researchers to communicate, but over the past few decades, the cost of journal subscriptions has significantly increased. The average increase per journal subscription between 1986 and 1996 was 147%. The introduction of the internet drastically changed publishing and made it feasible to publish for less money.[13] The engineering journals and publications are highly costly and hardly to find because the engineering is a dynamic field and it is not possible to update every new things in daily printed

[10] Jain, P.B., 2010. 'ICT & Its Impact on Academic Libraries, Role of College Librarian in the information Network Era proceedings. UGC sponsored state level conference, Nagpur : V.M.V. Commerce, J.M.T. Arts & J.J.P. Science College, 6th September, pp 28-30.

[11] Lakshmipathi Lokachari, Use of ICT on Resources and Services by the Faculty Members of Sri Vidyanekethan Engineering College Chittoor District, Andhra Pradesh: A Study, International Journal of Library and Information Studies Vol.7(2) Apr-Jun, 2017 ISSN: 2231-4911 http://www.ijlis.org

[12] Gajanan P. Khiste, Role of Information Communication Technology in Library https://www.researchgate.net/publication/319268731Role_of_Information_Communication_Technology_in_Library

[13] LISBDNETWORK, Impact of ICT in Library and Society January 3,2021 https://www.lisedunetwork.com/impact-of-ict-in-library-and-society/

materials so electronic journals made it easy for everyone to find all the materials in the same place at finger tips with the use of ICT.

ENGINEERING DIGITAL LIBRARY

The National Digital Library of India (NDLI) is a virtual library featuring search and browse functionality as well as a number of other services for the learning community. Through its National Mission on Education through Information and Communication Technology, the Ministry of Education of the Government of India sponsors and guides it (NMEICT). Focused searching is made easier by the use of filtered and federated searching, allowing students to access the appropriate resource quickly and easily. NDLI offers services tailored to the needs of particular user groups, such as exam preparation for high school and college students as well as job seekers. Services are also offered for general learners and researchers. The NDLI provides interface support for the top 10 spoken languages in India and is built to hold content in any language. It is designed to accommodate students of all academic levels, including researchers and lifelong learners, all academic specialties, all widely used access devices, and students with disabilities. It is intended to make it possible for people to prepare for situations by learning from best practises from around the globe and to make it easier for researchers to conduct interconnected research from many sources. It was created, and managed by Indian Institute of Technology Kharagpur.[14]

The availability of resources and accessibility to limitless instructional information is the main advantage of using a digital library for learning. Students benefit from the option of choosing from a variety of learning formats because the choices are hand-picked according to the course with a digital learning platform. So, using a digital library, an engineering student can choose to learn from instructional videos. In contrast to a traditional library, a digital library allows students to read about or comprehend from real-time illustrations in the form of infographics or movies, allowing them to fully grasp the topic topics. By giving them access to a vast array of educational resources, it broadens their horizons in terms of what they can learn.[15]

---

[14] National digital library of India https://ndl.iitkgp.ac.in/
[15] Online Digital Library for Engineering Students Mintbook October 7, 2021 https://mintbook.com/blog/online-digital-library-engineering-students/

IMPORTANT INCLUSIONS OF ENGINEERING LIBRARIES

- RFID technology has to be installed in Engineering Institutions.

- Engineering college libraries need to preserve the old books and to value them.

- E-paper is to be sent daily in to the group of faculty and students members of Engineering and Technology institution.

- Content is to be digitalized in every Institution.

- Computers should be installed with high speed internet connectivity, printers, fax machines, scanners, etc.

- Institutional Repositories services are provided by college libraries.

- E-magazine, journal, current affairs group is to be created by College Library.

- Colleges have to include the library hour in daily working schedule.

- Language Development Programme has to be organized every week by library department.

- Colleges have to installed plagiarism software to check the uniqueness of the paper.

- Self Learning Motivation programme has to be organized weekly.

- Installation of CCTV cameras in libraries for security purposes of the library and personal belongings of individuals.

NEED OF ENGINEER-LIBRARIANS IN PRESENT ERA

Librarians have long been crucial to research and information services, giving scientists the knowledge they need and assisting students in finding what they're looking for. However, the modern librarian's position has developed into one of the most varied positions on a campus of a university. Given how swiftly technology develops, scientific librarians in particular are faced with exposing their clients to the most recent materials and innovations. Information acquisition, appraisal, and presentation are concerns shared by research librarians, cataloguing librarians, and library administrators. At the university level, librarians specialize in subject areas to better serve the needs of the disciplines they are assigned to.[16]

---

[16] Claudia J. Dold, The Role of Librarians in Academic Success
https://digitalcommons.usf.edu/cgi/viewcontent.cgi?article=1157&context=tlas_pub

Libraries have long served as the intermediaries between those seeking knowledge and those seeking it. The parent organization's scholar community has service suppliers. Therefore, it is clear that a library is essential to the survival of every academic institution. Additionally, if a library is neglected or not given high priority by a university, it won't be long before it is damaged or destroyed.

Engineers, engineering teachers, and engineering students have benefited from the positive, long-standing history of information access and retrieval facilitated by engineering librarians. This link stayed solid during the era of information on paper because it was founded on years of custom. The information was stored and managed by the librarian, and the patron needed to visit the library to obtain it. One major objective of the library was to gather and locally disseminate as much information as feasible in order to be prepared for requests in the event that a client needed any particular item. Library teaching often included getting familiar with card catalogues, indexes, and categorization systems as well as reminders to provide credit for quotes and informational nuggets taken directly from sources.

The Librarian is duty bound to provide the materials for study to faculty, research scholars, students, etc. They should keep themselves posted with the latest books, new periodicals and projecting new through researchers so that the research became purposeful. The librarian and staff play a very important role in the improvement of teaching standards by guiding the teachers to the latest books. In the present time there is need for a change. Generally the librarians are graduate or master qualified candidates of library and information science with ample knowledge of librarianship, but a bitter truth is that no person has complete knowledge of everything. When a student, faculty or research scholar comes to library for study material or discussion for books or journals, it is important that the librarian and staff should have general knowledge of that topic beforehand. It is not necessary that the librarian should have the knowledge of every concept of engineering, but to provide better quality material in less time, it is very important that the librarian should have superficial knowledge. In today's time it is necessary that the librarians hired to manage the library of engineering should have a degree in engineering in any discipline other than Bachelor and Master of Library Science so that he/she should be able to maintain the library of engineering college with adequate engineering knowledge and library management skills.

CONCLUSION AND SUGGESTION

In addition to serving as knowledge repositories, libraries also serve as cultural transmitters. Information sharing is essential to the growth of wisdom. After Independence, libraries began to thrive, but in the modern day, their growth has gone beyond their physical walls and into the digital world. ICT has revolutionised library services, collection creation, and management, making it easier than ever to save and access information. It has also become a crucial instrument for teaching and learning processes. Traditional services are ineffective in addressing users' needs while saving their time. Therefore, academic librarians have no alternative but to warmly accept and properly implement information and communication technology in order to satisfy users' expectations and to provide better services and timely service enhancement. The vice president, Mr. Venkaiah Naidu, emphasised the value of teachers and education by saying that Google can never replace a "guru" (teacher).[17] Google offers more resources, but librarians give the proper ones to the students at the right moment. Libraries are trustworthy sources of knowledge and information. Even with the standard library collections, effective staff workers and librarians may successfully meet user expectations. It is quite evident that the effective librarians and staff are solely responsible for the library's success.

A library is essential to the achievement of higher education in engineering and technology. Collection development, reference services, circulation, document delivery, user education, access to electronic resources, and other crucial tasks are carried out by engineering college libraries. It is intended that engineering college libraries will offer dependable, affordable access to information utilising cutting-edge IT capabilities. The Engineering College Library's primary goal is to serve as a dynamic tool for explaining the expanding boundaries of knowledge. The library makes an effort to meet the legitimate requirements and demands of its users, from senior academics working on advanced research to newcomers, in order to inspire and motivate students to form lifelong habits of good reading, studying, and research.

Some of the suggestions for the betterment of technical and engineering libraries with appointment of advanced engineer librarians are as follows-

---

[17] Google Can Never Replace Guru: Vice President M Venkaiah Naiduhttps://www.ndtv.com/andhra-pradesh-news/google-can-never-replace-guru-vice-president-m-venkaiah-naidu-1785895

- In order to discuss and address user inquiries, the Library Committee will need the assistance of the IQAC Coordinator.

- To enhance the email alert and current awareness services, a group e-mail ID is to be created.

- The development of institutional repositories must be started by college libraries.

- Every library is required to offer Wi-Fi access to its resources.

- To prevent error-free records, non-erasable barcodes are required.

- To deliver the rapid and improved services of the library, efficient staff is required.

- Every library must host educational events featuring speakers, movies, and other forms of inspiration.

- To raise the standard of library services, more reference books and publications with practical applications are required.

- Through digital library services, libraries should make electronic reference items available.

- Each librarian must run user education campaigns to promote the use of library resources.

- The library's most recent additions must be updated on notice board and one reference staff member must be assigned by librarians to help users.

- To meet the needs of the researcher, a programme for reference management tools awareness is required.

- A training programme for mind maps is required to raise educational standards.

- To develop a programme to raise knowledge of Google Scholar, NPTEL Swayam, etc.

REFERENCES

1. Nagesh and Mirza, Role of Libraries in Higher education, page no 152-163

2. Khatri and Mulla, Planning of libraries in India, page28-32

3. Sohail, Md & Mazoom Raza, M. (2012). "Measuring Service Quality in Dr. Zakir Husian Library, J.M.I. New Delhi: A Survey". Library Philosophy and Practice (ejournal), 802. doi:http://digitalcommons.unl.edu/libphilprac/802

4. AICTE Approved Institutes for the Academic Year: 2021-2022 - `Madhya Pradesh https://facilities.aicte-india.org/dashboard/pages/dashboardaicte.php

5. Belsare, S.D. (2012-2013). Development and management of engineering college libraries in Western Vidarbha region: an analytical study. (Doctoral Dissertation). Shri Jagdish Prasad Jhabarmal Tibrewala University, Vidyanagari, Jheenjhunu, Rajasthan. Retrieved 9 Feb, 2015 from http://www.shodhganga inflibnet.ac.in

6. Goldman, Julie, Donna Kafel, and Elaine R. Martin. (2015). "Assessment of Data Management Services at New England Region Resource Libraries." Journal of Science Librarianship, 4(1): e1068. https://doi.org/10.7191/jeslib.2015.1068

7. Kitturand Geeta & Biradar Kavita (2017). Digital Library Initiatives: A Boon for Preservation of Information Resources in India. International Journal of Science and Research, Volume 6, Issue 1, January 2017. www.ijsr.net

8. K.m, P. (2018). Use of ict resources and services at state university libraries in Gujarat a study. Retrieved from: http://hdl.handle.net/10603/247168

9. N. Murugesan and R. Balasubramani (2011), "Application of ICT Based Resources and Services in Research and Development Libraries in Tamilnadu: An Analytical Study", European Journal of Social Sciences – Volume 23, Number 1, pp.154- 161.

10. Jain, P.B., 2010. 'ICT & Its Impact on Academic Libraries, Role of College Librarian in the information Network Era proceedings. UGC sponsored state level conference, Nagpur : V.M.V. Commerce, J.M.T. Arts & J.J.P. Science College, 6th September, pp 28-30.

11. Lakshmipathi Lokachari, Use of ICT on Resources and Services by the Faculty Members of Sri Vidyanekethan Engineering College Chittoor District, Andhra Pradesh: A Study,

International Journal of Library and Information Studies Vol.7(2) Apr-Jun, 2017 ISSN: 2231-4911 http://www.ijlis.org

12. Gajanan P. Khiste, Role of Information Communication Technology in Library https://www.researchgate.net/publication/319268731Role_of_Information_Communication _Technology_in_Library

13. LISBDNETWORK, Impact of ICT in Library and Society January 3,2021 https://www.lisedunetwork.com/impact-of-ict-in-library-and-society/

14. National digital library of India https://ndl.iitkgp.ac.in/

15. Online Digital Library for Engineering Students Mintbook October 7, 2021 https://mintbook.com/blog/online-digital-library-engineering-students/

16. Claudia J. Dold, The Role of Librarians in Academic Success https://digitalcommons.usf.edu/cgi/viewcontent.cgi?article=1157&context=tlas_pub

17. Google Can Never Replace Guru: Vice President M Venkaiah Naiduhttps://www.ndtv.com/andhra-pradesh-news/google-can-never-replace-guru-vice-president-m-venkaiah-naidu-1785895