

ICT-based Library Resources and Services of College Libraries in Konkan Region of Maharashtra State

Dr. Yogesh M. Borse¹; Rahul K. Shewale²

Librarian, Vidyadhan Commerce College, Dhule ¹; Librarian, Shri Pancham Khemraj Mahavidyalaya, Sawantwadi, Maharashtra, India²

yogeshborsesir@gmail.com; rahulshewale28@gmail.com

ABSTRACT

The present study reviews the ICT-based library resources and services of college libraries in the Konkan region of Maharashtra state. A survey was conducted of 89 aided college libraries in Thane, Palghar, Raigad, Ratnagiri and Sindhudurg districts under the jurisdiction of the Joint Director of Higher Education, Konkan Region, Panvel. The objectives of this study were to determine the availability of ICT resources in college libraries in the Konkan region, to determine the e-resources and databases provided by the Konkan region college libraries, to know the ICT-based services offered by the Konkan region college libraries, and to know the web-based services that are provided to users.

KEYWORDS: Information and Communication Technology, ICT, Library Resources and Services, College Library, ICT Services.

1. INTRODUCTION

The introduction of ICT-based resources and services has significantly transformed the way individuals, organizations, and governments access, manage, and disseminate information. Information and Communication Technology (ICT) encompasses a broad range of digital tools and platforms, including computers, the internet, mobile devices, cloud computing, and software applications, that facilitate communication and data processing. These technologies have enabled more efficient service delivery in sectors like education, healthcare, finance, and public administration. For instance, online learning platforms, digital libraries, e-governance systems, telemedicine, and mobile banking have made services more accessible, cost-effective, and user-friendly. The integration of ICT has also promoted transparency, improved productivity, and fostered innovation, thereby playing a crucial role in the socio-economic development of both developed and developing nations.

ICT-based resources and services refer to the tools, platforms, and applications that utilize Information and Communication Technology to support the creation, storage, sharing, and management of information. These

include digital libraries, online learning platforms, e-books, multimedia content, virtual labs, cloud storage, and communication tools like email, video conferencing, and instant messaging. Additionally, services such as e-governance, telemedicine, e-banking, and e-commerce heavily rely on ICT to deliver information and services quickly and efficiently to users. These resources and services play a vital role in education, business, healthcare, and public administration by making information more accessible, enhancing collaboration, and improving the overall quality and speed of service delivery.

The concept of ICT-based resources and services revolves around the use of Information and Communication Technology to enhance access to information, improve communication, and support various activities across different sectors. ICT-based resources include digital tools such as e-books, educational software, online databases, and multimedia content, which are used for learning, research, and information sharing. On the other hand, ICT-based services refer to technology-driven services, such as e-learning, e-health, e-governance, and online banking, that provide users with convenient and efficient access to essential services through digital platforms. These resources and services aim to improve productivity, promote digital inclusion, and enable faster, more flexible interactions in education, business, healthcare, and beyond.

2. OBJECTIVES OF THE STUDY

The main objectives of the study are as follows:

- To know the availability of ICT resources in college libraries in the Konkan region.
- To know the e-resources and databases provided by the Konkan region college libraries.
- To know the ICT-based services provided by the Konkan region college libraries.
- To know the web-based services that are provided for users.

3. SCOPE OF THE STUDY

The present study covers only aided college libraries in Thane, Palghar, Raigad, Ratnagiri, and Sindhudurg districts, which fall under the jurisdiction of the Joint Director of Higher Education, Konkan Region, Panvel. Only arts, commerce, and science colleges were selected for this survey research.

4. METHODOLOGY OF THE STUDY

This study covers the current status of college libraries in Thane, Palghar, Raigad, Ratnagiri, and Sindhudurg districts. The study is based on a comprehensive survey of college libraries. A structured questionnaire was used to collect the data.

5. ANALYSIS AND FINDINGS

There are 94 aided colleges in Thane, Palghar, Raigad, Ratnagiri, and Sindhudurg districts. Out of these, 89 college libraries responded to the questionnaire, resulting in a response rate of 94.68%.

ICT-based Library Resources and Services of College Libraries in Konkan Region of Maharashtra State

Table No. 1: Data Received from Library Professionals

Total No. of Questionnaire Distributed	Total No. of Response Collected	Responses in %
94	89	94.68%

5.1 DEMOGRAPHIC DETAILS

Table 2 indicates that out of 89 respondents, 73 (82.02%) are male and 16 (17.97%) are female.

Table 2: Gender wise distribution

Gender	No. of Respondents	Percentage %
Male	73	82.02
Female	16	17.97
Total	89	100

5.2 YEARS OF EXPERIENCE OF LIBRARY PROFESSIONALS

Table 3 exposes the years of experience of library professionals. Out of 89 library professionals surveyed, 26 (29.21%) library professionals have 11-15 years of experience. Following closely are the groups with 16-20 years and 21-25 years of experience. 19 (21.34%) library professionals with 16-20 years of experience. 3 (3.37%) library professionals have 1-5 and 31-35 years of experience each. No library professionals have experience exceeding 35 years.

Table 3: Year of Experience of Library Professionals

Range in Years	Experience in Years	Percentage
1-5	3	3.37
6-10	11	12.35
11-15	26	29.21
16-20	19	21.34
21-25	16	17.97
26-30	11	12.35
31-35	3	3.37
Total	89	100

5.3 LIBRARY COLLECTION

Table 4 summarizes the types of library collections in 89 colleges. Most college libraries have extensive book collections, with over 60% having more than 10,000 books, and 32 (35.95%) libraries have more than 30,000 books. In contrast, e-books are more varied; 35 (39.32%) libraries have less than 5,000, while 29 (32.58%) libraries have over 30,001 e-books. Nearly all 88 (98.87%) college libraries have less than 5,000 journals, while 39 (43.82%) libraries have less than 5,000 e-journals, 29 (32.58%) libraries have 5,001 to 10,000 e-journals, and 4 (4.49%) libraries do not have e-journals. 81 (91.01%) libraries have less than 5,000 bound volumes, and 82 (92.13%) libraries have less than 5,000 CDs, and a few colleges have none. 64 (71.91%) libraries have less than 5,000 other collections

Table 4: Library Collection

Library Collection	Less than 5,000 (%)	5,001 to 10,000 (%)	10,001 to 20,000 (%)	20,001 to 30,000 (%)	More than 30,001 (%)	Nil (%)	Total
Books	5 (5.61)	9 (10.11)	22 (24.71)	21 (23.59)	32 (35.95)	0	89
E-Books	35 (39.32)	12 (13.48)	4 (4.49)	4 (4.49)	29 (32.58)	5 (5.61)	89
Journals	88 (98.87)	0	0	0	0	1 (1.12)	89
E-Journals	39 (43.82)	29 (32.58)	2 (2.24)	1 (1.12)	14 (15.73)	4 (4.49)	89
Bound Volumes	81 (91.01)	2 (2.24)	0	0	0	6 (6.74)	89
CDs	82 (92.13)	0	0	0	0	7 (7.86)	89
Other	64 (71.91)	0	0	2 (2.24)	0	23 (25.84)	89

5.4 INSTITUTIONAL REPOSITORY DIGITAL LIBRARY

Table 5 shows the presence of institutional repository digital libraries across 89 libraries. Out of these, 50 (56.17%) libraries have established a digital repository, indicating that a majority have adopted digital platforms for storing and sharing institutional content. However, 39 (43.82%) libraries do not have such a system. This suggests that while digital repositories are gaining traction, a significant portion of institutions have yet to implement them.

Table 5: Institutional repository digital library

Institutional repository digital library	No. of Libraries	%
Yes	50	56.17
No	39	43.82
Total	89	100

5.5 TYPES OF DOCUMENTS INCLUDED IN INSTITUTIONAL REPOSITORY COLLECTIONS

Table 6 outlines the types of documents available in the institutional repositories of 89 libraries. The most commonly available resources are question papers, found in 68 (76.40%) libraries, followed by journals, magazines, and conference proceedings in 54 (60.67%) libraries and study materials in 53 (59.55%) libraries. E-books are available in 49 (55.05%) libraries, while theses and dissertations are present in 44 (49.43%) libraries.

Table 6: Types of documents included in Institutional Repository collections

Types of Documents	No. of Libraries	%	Total
E-Books	49	55.05	89
Journals/ Magazines/ Conference proceedings	54	60.67	89
Theses/ Dissertations	44	49.43	89
Study Materials	53	59.55	89
Question papers	68	76.40	89
Lecture notes	34	38.20	89
Audio files	30	33.70	89
Images	41	46.06	89

5.6 DATABASES FOR E-RESOURCES

Table 7 provides the availability of e-resource databases in libraries. N-LIST of INFLIBNET is available in 80 (89.88%) libraries, while DELNET is available in 12 (13.48%) libraries.

Table 7: Subscribed e-resources database

E-Resource Database	No. of Libraries	%
N-LIST	80	89.88
DELNET	12	13.48

5.7 ELECTRONIC RESOURCES AND DATABASES

Table 8 presents the availability and use of e-resources and databases. E-books and e-journals are widely adopted, with each rated as excellent by 34 (38.20%) libraries. A substantial number of libraries also consider them average (32.58% and 33.70%, respectively). E-theses also show strong implementation, with 31 (34.83%) libraries rating them excellent. However, resources like e-newspapers, indexing and abstracting databases, and library consortia are less well-established. Only 25 (28.08%) libraries rated e-newspapers as excellent, while indexing and abstracting databases received the majority of ratings in the average and below categories.

Open-access journals and library websites are relatively strong areas, with each having 39 (43.82%) libraries rating them as excellent. OPAC/Web OPAC stands out, with the highest excellent rating, 44 (49.43%) libraries, suggesting it is among the most mature and widely used digital services.

On the other hand, areas such as digital archives/subject gateways and institutional repositories are still in development. Digital archives received evenly distributed ratings across excellent, above average, and average, with each category comprising 23 (25.84%) libraries, and also had notable numbers in the lower categories.

Library networks exhibit moderate adoption, with 26 (29.21%) libraries rating them as excellent and 24 (26.96%) as above average. However, 11 (12.35%) libraries rated them below average, indicating some uneven development.

Table 8: Electronic resources and databases

Electronic resources & databases	E (%)	AA (%)	A (%)	BA (%)	EP (%)	Total
E-Books	34 (38.20)	15 (16.85)	29 (32.58)	5 (5.61)	6 (6.74)	89
E-Journals	34 (38.20)	15 (16.85)	30 (33.70)	4 (4.49)	6 (6.74)	89
E Newspapers	25 (28.08)	18 (20.22)	28 (31.46)	5 (5.61)	13 (14.60)	89
E-Theses	31 (34.83)	15 (16.85)	23 (25.84)	8 (8.98)	12 (13.48)	89
Indexing & Abstracting Databases	16 (17.97)	17 (19.10)	28 (31.46)	14 (15.73)	14 (15.73)	89
Institutional Repository	26 (29.21)	16 (17.97)	23 (25.84)	12 (13.48)	12 (13.48)	89
OPAC/ Web OPAC	44 (49.43)	17 (19.10)	17 (19.10)	3 (3.37)	8 (8.98)	89
Library Consortia	20 (22.47)	22 (24.71)	23 (25.84)	9 (10.11)	15 (16.85)	89
Open Access Journals	39 (43.82)	17 (19.10)	20 (22.47)	1 (1.12)	12 (13.48)	89
Library website	39 (43.82)	20 (22.47)	16 (17.97)	4 (4.49)	10 (11.23)	89
Digital archives / Subject gateways	23 (25.84)	23 (25.84)	23 (25.84)	11 (12.35)	9 (10.11)	89
Library Networks	26 (29.21)	24 (26.96)	22 (24.71)	11 (12.35)	6 (6.74)	89
E- Excellent, AA- Above average, A- Average, BA- Below average, EP- Extremely poor						

5.8 ICT-BASED SERVICES

Table 9 shows that ICT-based services are provided to the users by the college libraries. The most highly rated services include New Arrival Alert Service, with 46 (51.68%) libraries rating it as excellent, and Online Cataloguing/OPAC/Web OPAC, where 43 (48.31%) also rate it as excellent. Similarly, the circulation of books in an automated environment received excellent ratings from 43 (48.31%) libraries, indicating strong integration of automation in routine library tasks.

Access to full-text databases is also well-established, rated excellent by 37 (41.57%) libraries, with another 21 (23.59%) libraries considering it above average. Services like Electronic/Online Document Delivery and CAS/SDI are more varied in their implementation, with moderate numbers rating them from excellent to below average.

ICT-based Library Resources and Services of College Libraries in Konkan Region of Maharashtra State

On the lower end, services such as Indexing and Abstracting, Online Bibliographic Services, and Inter-Library Loan show a broader distribution, with fewer libraries rating them as excellent and more indicating average or below average. Indexing and Abstracting is rated as excellent by only 17 (19.10%) libraries, and Inter-Library Loan has the highest proportion in the average category, with 26 (29.21%) libraries.

Table 9: ICT-based services

ICT-based services	E (%)	AA (%)	A (%)	BA (%)	EP (%)	Total
Access to full text databases (e-books, e journals, etc.) Service	37 (41.57)	21 (23.59)	23 (25.84)	3 (3.37)	5 (5.61)	89
Circulation of books in automated environment	43 (48.31)	30 (33.70)	11 (12.35)	3 (3.37)	2 (2.24)	89
Bulletin Board Service	20 (22.47)	26 (29.21)	20 (22.47)	12 (13.48)	11 (12.35)	89
Online Cataloguing/ OPAC/ Web OPAC	43 (48.31)	21 (23.59)	18 (20.22)	4 (4.49)	3 (3.37)	89
Electronic/ Online document delivery service	27 (30.33)	24 (26.96)	20 (22.47)	10 (11.23)	8 (8.98)	89
Indexing and Abstracting service	17 (19.10)	22 (24.71)	24 (26.96)	11 (12.35)	15 (16.85)	89
CAS/SDI	24 (26.96)	32 (35.95)	19 (21.34)	9 (10.11)	5 (5.61)	89
Inter Library Loan (through networking)	21 (23.59)	24 (26.96)	26 (29.21)	10 (11.23)	8 (8.98)	89
New Arrival Alert Service	46 (51.68)	25 (28.08)	12 (13.48)	4 (4.49)	2 (2.24)	89
Online bibliographic service	20 (22.47)	27 (30.33)	22 (24.71)	12 (13.48)	8 (8.98)	89
E- Excellent, AA- Above average, A- Average, BA- Below average, EP- Extremely poor						

5.9 WEB-BASED SERVICES

Table 10 presents the availability of various web-based services offered by libraries. The most widely provided services include e-mail alert services provided by 64 (71.91%) libraries, Current Awareness Services (CAS) and reading lists are offered by 63 (70.78%) and 62 (69.66%) libraries, respectively. Online reference services are also available in 60 (67.41%) libraries. About 43 (48.31%) libraries provide selective information dissemination (SDI) using digital resources, and 41 (46.06%) libraries provide e-document distribution services. 38 (42.69%) libraries offer services like online membership registration, bulletin boards 32 (35.95%) libraries, FAQs 30 (33.70%) libraries, subject gateways or web portals 27 (30.33%) libraries, and online chat services, which are provided by only 25 (28.08%) libraries.

Table 10: Web-based services

Web-based services	Responses	%
Bulletin Board	32	35.95
E-mail alert services	64	71.91
Online reference service	60	67.41
Online chat service	25	28.08
CAS	63	70.78
SDI using digital resources	43	48.31
FAQ	30	33.70
Subject Gate/Web portal	27	30.33
E-document delivery service	41	46.06
Reading List	62	69.66
Online Library Membership Registration	38	42.69

6. CONCLUSIONS

Most of the 26 (29.21%) library professionals had 11-15 years of work experience. Most libraries had large print books and e-books collections, while print journals, bound volumes, and CDs were generally limited collections. Almost 56.17% of libraries have established an institutional repository or digital library. Traditional academic resources, such as question papers, journals, magazines, conference proceedings, and study materials, are included in large quantities. However, audio files, images, and lecture notes are available in limited quantities within repository collections. Core digital services, such as OPACs, e-books, e-journals, and open-access platforms, are well-integrated across many institutions. In contrast, specialised or collaborative tools, including digital archives, library consortia, and indexing databases, exhibit more varied levels of implementation. Many libraries subscribed to the N-LIST database rather than DELNET to access e-resources. Core ICT services, such as OPAC, circulation, and access to e-resources, are well-developed in many libraries. In contrast, more specialized or collaborative services, like inter-library loan and abstracting, are still emerging or are moderately developed in many institutions. Many libraries have embraced web-based services that support user engagement and information dissemination (like e-mail alerts, CAS, and reading lists). Still, fewer have implemented interactive or personalized tools, such as chat or membership registration.

REFERENCES

- [1] Ansari, M. N. (2013). ICT Skills Proficiency of Library Professionals: A Case Study of Universities in Karachi, Pakistan. *Chinese Librarianship: An International Electronic Journal*, 36(1), 72-84.
- [2] Bajpai, V. K., & Madhusudhan, M. (2019). ICT Skills and Competencies of Library and Information Science Professionals working in College Libraries, University of Delhi: A study. *Library Philosophy & Practice*. Retrieved September 26, 2025, from <https://digitalcommons.unl.edu/libphilprac/2275>
- [3] Chitra, K. S., & Kumbar, M. (2020). ICT Infrastructure and Automation in First Grade College Libraries Affiliated to University of Mysore: A Study. *International Journal of Library and Information Studies*, 10(2), 156-166.

ICT-based Library Resources and Services of College Libraries in Konkan Region of Maharashtra State

- [4] Kumar, G. K., & Hulamani, C. B. (2018). ICT Literacy among Library Professionals of Professional Colleges in Southern Karnataka: A Survey. *International Journal of Information Movement (IJIM)*, 2(11), 26-34.
- [5] Kumar, P. (2012). Use of ICT based resources and services in engineering college libraries in Haryana, India: an analytical study. *International Journal of Library and Information Studies*, 2(2), 11-17.
- [6] Mishra, L., & Mishra, J. (2014). ICT resources and services in university libraries. *International Journal of Digital Library Services*, 4(3), 243-250.
- [7] Patel, K. M., & Darbar, M. (2017). Use of ICT Resources and Services at Selected Government Grant-in-Aid University Libraries in Gujarat-A Study. *International Research: Journal of Library and Information Science*, 7(1).
- [8] Satpathy, S. K., & Maharana, R. K. (2011). ICT Skills of LIS Professionals in Engineering Institutions of Orissa, India: A Case Study. *Library Philosophy and Practice*, 3, 124-134.
- [9] Seena, S. T., & KG Pillai, S. (2014). A Study of ICT Skills among Library Professionals in the Kerala University Library System. *Annals of Library and Information Studies (ALIS)*, 61(2), 132-141.
-