

## E-Library Services of Inter-University Centres in Enhancing Higher Education and Research in the Digital Age

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### Abstract

In the digital age, e-library services have become pivotal in supporting higher education and research Centres, especially within Inter University (IUC) of the University Grants Commission (UGC). This paper explores the transformational impact of e-library services, and facilities access to educational resources in varieties for their end-users. The study examines various models of e-library services, their integration into academic workflows, and their role in promoting interdisciplinary research and innovation. This paper also highlights the best practices and provides recommendations for optimizing e-library services to meet the evolving needs of higher education and research communities in the digital era. The findings highlight that out of seven IUCs of UGC, only seven Centres have all the general and specific services and facilities highlighted in this study.

**Keywords:** Inter-University Centres, University Grants Commission, Digital library, Web services, Library facilities, E-Library services.

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### I. Introduction

The UGC established Inter-University Centres (IUCs) within the university system under Clause 12 (CCC) of the UGC Act to offer cutting-edge and centralized facilities and services for universities that are unable to make significant investments in other inputs and infrastructure. They play an essential role in providing the best expertise for faculties and researchers of higher education and research. IUCs also strive to provide advanced library services meeting global standards. The present study focuses on the importance of IUC libraries in enhancing higher education and research in the country.

### II. Background of the Study

The study conducted by Naik, Suvarna, and Yashodha (2022) focused on the importance of IUCs in higher education and research by focusing on objectives, services, projects, and other activities accomplished by them. Authors observed that IUCs have their subject specialization by order of UGC and universities that lack the necessary infrastructure can make use of these IUC facilities and resources to improve the quality of higher education.

Tetrevova and Vlckova (2018) evaluated the scope and importance of inter-university cooperation by conducting survey among managers of higher education institutions (HEIs). The study shows that, most of the managers of HEIs/faculties consider this collaboration to be, at least, very significant for technical, scientific, and medical specialization.

Rose (2013) stressed on the role of INFLIBNET, an IUC of UGC in modernizing university libraries and information centres in the country by using state-of-the-art technologies. Author in her article highlighted the objectives, goals, functions, and services of INFLIBNET.

Kembhavi (2012) briefly elucidated the Inter-University Centre for Astronomy and Astrophysics (IUCAA), Pune, India an autonomous institution under the University Grants Commission (UGC), a centre of excellence for research in astronomy and astrophysics (A&A) and related areas. It also serves as a platform for the entire university community in the country for work in astronomy and astrophysics.

### III. Objectives of the Study

The main objectives of the study are as follows:

- To identify the general facilities and services offered by the IUCs to improve higher education and research in India
- To know the importance of library and information services in IUCs.

- To find out the type of web based library and information services provided by the IUC of UGC
- To observe the overall status of library and information activities highlighted in the institutional URLs (library webpages)

#### **IV. Methodology**

As per the UGC (2023) portal, seven Inter-University Centres of the University Grants Commission work in different disciplines and main objectives and functions. The author selected all the functions, activities, and library services for their end users based on internet / web-enabled desktop services. From 1<sup>st</sup> June 2024 to 3<sup>rd</sup> July 2024 collected the relevant data from the seven IUC Centres of UGC.

**Table – 1:** IUC Center of UGC in India

Sl.No.	Institute Name	URL
1	Consortium For Educational Communication (CEC)	<a href="https://cec.nic.in/cec/">https://cec.nic.in/cec/</a>
2	Information and Library Network (INFLIBNET) Centre	<a href="https://www.inflibnet.ac.in/">https://www.inflibnet.ac.in/</a>
3	Inter University Accelerator Centre (IUAC)	<a href="https://www.iuac.res.in/">https://www.iuac.res.in/</a>
4	Inter University Centre for Teacher Education (IUCTE)	<a href="https://www.iucte.ac.in/">https://www.iucte.ac.in/</a>
5	Inter-University Centre for Astronomy and Astrophysics (IUCAA)	<a href="https://www.iucaa.in/en/">https://www.iucaa.in/en/</a>
6	National Assessment and Accreditation Council (NAAC)	<a href="http://naac.gov.in/">http://naac.gov.in/</a>
7	UGC-DAE Department of Atomic Energy Consortium for Scientific Research (UGC-DAE CSR)	<a href="https://www.csr.res.in/">https://www.csr.res.in/</a>

Table 1 shows the major IUC Centres along with their websites. The Centre name specifies the different disciplines like INFLIBNET for Library Science and NAAC for Assessment and Accreditation, etc.

#### **V. Discussion**

The rapid advancement of technology has profoundly impacted various aspects of life, including higher education and research. One significant development is the rise of e-library services provided by inter-university Centres. These services have revolutionized access to information and resources, offering numerous benefits to students, researchers, and academic institutions. Here, we'll explore how e-library services of inter-university centres enhance higher education and research in the digital age.

##### **5.1 E-library Services**

The major areas covered in this study are as follows:

- a. Broad Access to Resources
  - i. Diverse Collections
  - ii. Remote Access
- b. Collaborative Research and Learning
  - i. Resource Sharing
  - ii. Networking Opportunities
- c. Enhanced Learning Experience
  - i. Multimedia Resources
  - ii. Customizable Learning Paths
- d. Support for Research Activities
  - i. Advanced Search and Retrieval
  - ii. Data Management and Analysis Tools
- e. Cost Efficiency
  - i. Reduced Costs
  - ii. Open Access Resources
- f. Promoting Digital Literacy
  - i. Digital Skills Development
  - ii. Training and Support
- g. Challenges and Considerations
  - i. Digital Divide
  - ii. Information Overload
  - iii. Data Privacy and Security



Figure 1: IUC Centres of UGC

Figure 1 shows that the author selected even IUC Centres of UGC for their study.

### 5.2 Subject Specialisation

Table – 2: Subject Specifications of IUCs

Sl.No.	Institute Name	Subject Specialisation
1	CEC	Higher Education with ICT
2	INFLIBNET	Library and Information Science
3	IUAC	Nuclear Science
4	IUCTE	Teacher Education
5	IUCAA	Astronomy and Astrophysics
6	NAAC	Assessment and Accreditation
7	UGC-DAE CSR	Atomic Energy

Table 2 indicates the Subject Specifications of IUCs are like CEC specializes in Higher Education with ICT, IAS focuses on Advanced Research, INFLIBNET specializes in Library and Information Science, IUAC specializes in Nuclear Science, IUCTE focuses on Teacher Education, IUCAA specializes in Astronomy and Astrophysics, NAAC focuses on Assessment and Accreditation, and UGC-DAE CSR specializes in Atomic Energy.

### 5.3 General Facilities

Table 3 outlines the general facilities and services offered by various IUCs of UGC. IUCs maintain an institutional website, Post Graduation programs, Ph.D. programs, and post-doc positions, conducting seminars, conferences, and development programs, Laboratory facilities, research publications, and various institutional publications and social media pages managed by the IUCs based on their specification.

Table 3: General Facilities/Services of IUC

Sl. No.	General Facilities/Services	CEC	INFLIBNET	IUAC	IUCTE	IUCAA	NAAC	UGC-DAE
1.	Institution Website	✓	✓	✓	✓	✓	✓	✓
2.	Post-Graduation Programme	×	×	✓	×	✓	×	✓
3.	Ph.D. programme/Post Doc positions/Projects	×	×	✓	✓	✓	×	✓
4.	Research facility	×	×	✓	×	✓	×	✓
5.	Seminars/Conferences/Webinars/Workshops /Faculty Development Programmes	✓	✓	✓	✓	✓	✓	✓
6.	Laboratory facility	×	×	✓	×	✓	×	✓
7.	Research Publications	✓	×	×	×	✓	×	
8.	Library	×	✓	✓	×	✓	✓	✓
9.	Institution publications - Annual report - Newsletter -University Directory	✓	✓	✓	×	✓	✓	✓
10.	Faculty publications	×	×	×	×	✓	×	✓
11.	Institutions' Social media page	✓	✓	✓	✓	✓	✓	✓

### 5.4 Library Facilities and Services

Library facilities and services are essential for generating new ideas. Table 4 lists 15 general facilities and services such as "Library Webpage," "OPAC/Web OPAC," "Access to Databases," and more, and indicates whether each institution provides these services with a check mark (✓) or not (×). CEC lacks most services, only offering a "Reference Service" and "Electronic Information Service." IIAS and INFLIBNET offer the most comprehensive range of services, including access to databases, online resources, and institutional repositories. IUAC, IUCTE, IUCAA, and NAAC offer a moderate range of services, each excelling in different areas. UGCA-DAE has a limited range of services, similar to CEC. This comparison highlights the diversity in library service offerings across these institutions.

Table 4: Library Facilities/Services

Sl. No.	General Facilities/Services	CEC	INFLIBNET	IUAC	IUCTE	IUCAA	NAAC	UGC-DAE
1.	Library Webpage	×	✓	✓	×	✓	✓	✓
2.	OPAC/Web OPAC	×	✓	✓	×	✓	✓	×
3.	Access to Databases	×	✓	×	×	✓	✓	×
4.	Display of New Arrivals on Website	×	×	×	×	✓	×	×
5.	Access to online/e-resources	×	✓	×	×	✓	✓	×
6.	Institutional repository/Archives	×	✓	×	×	✓	×	×
7.	Remote access facility	×	×	×	×	✓	×	×
8.	Reference Service	×	✓	✓	×	×	✓	×
9.	Document Delivery Service	×	✓	×	×	×	×	×
10.	Current Awareness Service	×	✓	×	×	✓	×	×
11.	Electronic Information Service	×	✓	×	×	✓	✓	×
12.	Inter-library Loan	×	✓	×	×	×	✓	×
13.	Referral Service	×	×	×	×	×	✓	×
14.	E-mail services	×	✓	×	×	✓	×	×
15.	Ask a Librarian	×	×	×	×	×	×	×

### 5.5 E-Resources

Table 5 outlines the availability of links to electronic educational resources across different institutions. The table lists 10 resources, including "Swayam," "Swavarnorabha," "E-PG Pathshala," "Vidya-Mitra," "N-List," "E-Shodhsindhu," "Shodhganga," "UGC-INFONET," "NME-ICT," and "Fellowship." CEC provides access to six of these resources, including "Swayam," "Swavarnorabha," and "Fellowship." INFLIBNET offers the widest range of resources, linking to all ten listed resources. Other institutions like IIAS, IUAC, and NAAC offer access to a select number of these resources, with NAAC and UGC-DAE having the fewest. This table highlights the varying degrees of electronic resource integration across these institutions.

Table 5: Links to Electronic Educational Resources

Sl. No.	Electronic educational resources	CEC	INFLIBNET	IUAC	IUCTE	IUCAA	NAAC	UGC-DAE
1.	Swayam	✓	✓	×	×	×	×	×
2.	Swayamprabha	✓	✓	×	×	×	×	×
3.	E-PG Pathshala	×	✓	×	×	×	×	×
4.	Vidya-Mitra	×	✓	×	×	×	×	×
5.	N-List	×	✓	×	×	×	×	×
6.	E-Shodhsindhu	×	✓	×	×	×	×	×
7.	Shodhganga	×	✓	×	×	×	×	×
8.	UGC-INFONET	×	×	×	×	✓	✓	×
9.	NME-ICT	✓	×	×	×	×	×	×
10	Fellowship	✓	×	×	×	×	×	✓

## VI. Conclusion

The advent of E-Library services in Inter-University Centres has significantly transformed higher education and research in the digital age. These services have democratized access to vast repositories of knowledge, breaking down geographical and institutional barriers that traditionally limited resource availability. By offering a centralized digital platform, E-Libraries facilitate collaborative research, enhance academic productivity, and support the continuous learning process. Moreover, the integration of advanced technologies such as AI and data analytics in these digital libraries has improved the efficiency of information retrieval, enabling scholars and students to find relevant resources swiftly. As higher education institutions increasingly adopt these digital tools, E-Library services will continue to play a pivotal role in fostering an environment of innovation, critical thinking, and academic excellence, ultimately contributing to the growth and evolution of

global educational standards. These Centers support and enhance higher education and research by providing shared resources, advanced facilities, and collaborative opportunities for end users across India.

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