

Content Analysis of Library Websites of the Centre with Potential for Excellence in Particular Area (CPEPA) Universities

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ABSTRACT

Libraries are taking a quintessential position in accumulating and disseminating fact offerings via library websites. The websites portray the library collection, library services, social networking sites, and web 2.0 tools used in the libraries. This study aims to evaluate the seventeen library website features of the Centre with Potential for Excellence in Particular Area (CPEPA) universities by identifying them through previous literature and consulting the checklist. Individual websites of the CPEPA Universities are consulted for the study. It helps users collect more information about those institutions. It significantly corresponds with the aspects of website assessment on the service, innovative solutions, multi-media options, web 2.0, e-resources and e-databases and platforms provided for easy information retrieval by their users and useful social networking plug-ins. The study reveals that there are seventeen Universities under the CPEPA scheme, the library websites mention about its mission, and vision statement. Sixteen out of seventeen universities provide information on library rules, library staff, library sections, and important web links, working hours & holiday lists. Most of the libraries have independent library website which is linked with University URL. All library websites except Jai Narain Vyas University provide e-journal and e-book links directly on the website. The libraries don't have a uniform library collection. Only 15 universities reflect the information of LMS and institutional repository details. Only Devi Ahilya University and Himachal Pradesh University libraries depict materials for blind users. Annamalai University and Guru Nanak Dev University libraries have coins in their collection. Lending, Inter-library loan, SDI and CAS, reference service and web 2.0 services are most common services provided by all the libraries. Seven university websites have bi-lingual interfaces. Only 6 universities provide keyword search facilities. Online book reservation facility is available only in University of Allahabad library. The study concludes that well designed library websites are very essential for today's digital environment and for enabling a 24*7 access to library resources. All the libraries under CPEPA Universities have not yet developed their websites full-fledged and needs more to be more comprehensive.

Keywords: Centre with Potential for Excellence in Particular Area (CPEPA); Content analysis; Library website; University library; Web 2.0 service

1. INTRODUCTION

Modern internet sharing and searching technologies give users more power, comfort, and enjoyment while looking for information. Librarians face a challenge in appeasing the current generation of tech-savvy users. Academic libraries may face particular challenges in meeting the varied information demands and objectives of users who have transitioned from print to electronic resources. Academic library websites mostly include access to online catalogues and details about their collections and services, other library tutorials, electronic databases, and online resources. People can use databases which must act as information gateways so that users may conduct research, request interlibrary loans online, and download scholarly articles electronically. The library website acts

as the user's initial introduction to the library's resources and an open platform for the community.

This research aims to examine university libraries' websites that come under the UGC Centre with Potential for Excellence in a Particular Area (CPEPA). The content of university libraries' websites have been examined in light of several variables, including general information, the history of the library, its resources, services, and collection, as well as contact details, RSS feeds, chat rooms for librarians. Providing users with accurate and reliable information is the primary goal of the university library website evaluation. The need for such an evaluation is that, one can know the Universities of excellence specialising in interdisciplinary and multidisciplinary researches and can show guidelines for the maintenance of library systems, which is quintessential for researchers in other Central and State Universities in India and abroad.

2. CPEPA-AN OVERVIEW

CPEPA Scheme is aimed at helping the chosen university improve its inter disciplinary and multi-disciplinary areas and specialised research initiatives in these fields. The commission has agreed to keep the CPEPA program going to inspire universities to create the territory of excellence in several fields. Over the years, the University Grants Commission (UGC) has provided financial assistance to the most prestigious universities and colleges in the country, enabling them to strive for excellence in their respective academic disciplines and research endeavours.

In year 2022, UGC included seventeen universities under its Centre with Potential for Excellence in a Particular Area (CPEPA) scheme. The table 1 contains university names along with potential areas of focus as per the UGC's website. Seventeen different universities are funded and guided by the CPEPA scheme of UGC. All universities have the potential for excellence in different areas. UGC is trying to create a tributary of excellence in various areas by providing this kind of initiative¹.

3. RELATED STUDIES

- Michalec² looks at information found on websites for art museums and libraries. An art library associated with a university, college, and art institution is another example of an academic or art school library that is being evaluated.
- Nowkarizi³ evaluates and compares the content of a few libraries' websites from North America, Europe, and Asia, this research also examines the degree to which the best content management practices are used for national library websites.
- Aharony⁴ aims to describe and examine websites of academic libraries spanning the years 2000 to 2010, which are available on both the Internet Archive and the websites of active libraries.
- Sife and Tandika⁵ research used content analysis to examine Tanzania's 16 university and university college library websites.
- Mohammed⁶, *et al.* investigated library websites of Nigerian universities, their content was analysed for strengths and flaws, and recommendations were made for ten libraries with functioning websites were selected at random for the research.
- Yoon and Schultz⁷ analysed 185 library websites to examine the research data (management) services offered by university libraries in the United States. The analysis centred on four primary areas- information, education, network, and service.
- Kuri and O⁸ examined the state of the websites belonging to the libraries of the six central government universities in South India. Their research, which provides an outline of the content available on all library websites, suggests that in order to better utilise libraries' activities in service of institutional goals, additional website design skills and techniques should be acquired through training and consistent internet usage.

- Al-Qallaf and Ridha⁹ evaluated the library websites across academic institutions in the Gulf Cooperation Council (GCC) to established website best practices.
- Devi and Verma¹⁰ examined their current study to assess and analyse the web pages and websites of the Indian Institutes of Technology libraries. Only four IITs have a library webpage, according to the study, which used survey and observation methods to gather the data from each of the 19 IITs'.
- Bharati and Margam¹¹ examined libraries web-content of Jawaharlal Nehru University (JNU) and Banaras Hindu University (BHU). The research evaluates the information on the libraries' websites for both universities (JNU & BHU) using qualitative assessment (11 checkpoints) and quantitative evaluation (170 checkpoints).
- Hugar¹² analyses the content of engineering college libraries affiliated with Goa University. Through the use of a checklist created specifically for this purpose, information was obtained from engineering college library website.
- Saloi¹³ investigate Assam University libraries' websites is the subject of an investigation into the accuracy of the information they contain.
- Pal¹⁴, *et al.* conduct a study to examine the information on national library websites in Asian nations (45). For this study, an assessment approach was used to determine the extent to which the national library websites of Asian nations satisfied the chosen requirements as specified in the relevant rules.
- Chowdhury and Das¹⁵ compared the five National Libraries from BRICS nations. Based on many aspects such as their holdings, Web 2.0 implementation, remote reference service, language-covering website, visitor's service, number of institutional repositories, and software used, they have classed them.
- Rafiq¹⁶, *et al.* conducted a study that looked at the tools, resources, training opportunities, and services provided by the websites of the top-ranked medical libraries in the world according to QS. Additionally, this study looks into the online medical resources offered by medical universities.
- Bajpai and Verma¹⁷ study's objective was to determine the availability of fundamental information on the library websites of CSIR institutions in Delhi and Uttar Pradesh, as well as the resources and services such websites offer.
- Chakraborty¹⁸ in his current study examines the top ten institutions in India with the highest NIRF rankings according to a list of rankings issued in 2021, taking into consideration 58 factors organised into nine checklists. According to the survey, all affiliated university libraries each contain a wide variety of data pertaining to their general collections, electronic resources, and library information. .
- According to Mumtaz¹⁹, *et al.* the aim of this research investigation is to examine the web-based resources that are available on the websites of public and private university libraries that the HEC recognises.

- Ullah²⁰ conduct a study to evaluate the quantity and caliber of Pakistani medical college (school) libraries' websites by predefined standards.
- Bulla and Hadagali²¹ their primary objective is to evaluate the functionality and utility of the content on the library websites of central universities in India..
- Arandhara²² conducted a study to assess the information found on the websites of four Assam University libraries.
- Kappi²³, *et al.* monitored the research output of "Universities with CPEPA status in Karnataka" from 2010 to 2019. An accumulation of 8952 documents comprised conference papers, book chapters, and journal articles. A consistent growth in research output was noted. The research findings indicate that the University of Mysore (UM) possesses the most publications, and citations are more likely to be awarded to co-author papers. The research identified the most prolific authors and their production impacts as measured by the number of citations (ACPP). Additionally, it specifies the journals and keywords utilised most frequently in the research results publication process. To facilitate visualisation, the Bibliometrix R Package and VOSviewer were utilised.
- Ezell²⁴, *et al.* aim to enhance knowledge regarding contemporary endeavors and implementations in the field of librarianship concerning accessibility. This research offers a wide-ranging content investigation of the accessible library websites and an analysis of the data related to resources, services, and facilities on academic library.
- K. S²⁵ thinks library websites provide the most convenient access to all online resources. Her present study aims to conduct a content analysis of the deemed university library website to investigate the information they contains.
- Ukwattage²⁶ shows that in this study, the online content of 16 health sciences university libraries in Sri Lanka was examined. The researcher checked library websites. Outcomes reflect library services, resources, and other online information.

In the preceding section, we have explored numerous existing studies. The studies highlighted the web analysis of academic libraries (Aharony⁴, Sife and Tandika⁵, Mohammed⁶, *et al.*, Yoon and Schultz⁷, Kuri and O⁸, Al-Qallaf and Ridha⁹, Devi and Verma¹⁰, Bharati and Margam¹¹, Hugar¹², Chakraborty¹⁸, Mumtaz¹⁹, *et al.*, Bulla and Hadagali²¹, Arandhara²², Ezell²⁴, *et al.*, K. S²⁵). Some studies (Nowkarizi³, Pal¹⁴, *et al.*, Chowdhury and Das¹⁵) also discusses the websites of National libraries and other public libraries and some others (Rafiq¹⁶, *et al.* Bajpai and Verma¹⁷, Ullah²⁰, Ukwattage²⁶) discuss about the websites of special libraries. Only one study (Kappi²³, *et al.*) is on bibliometric analysis of publication output from CPEPA Universities of Karnataka.

However, we were unable to locate a single study dedicated exclusively to the proposed idea, which focuses on university library websites of the Centre with Potential for Excellence in Particular Area (CPEPA), whether as a

whole or as a subset. The present study is specialised in finding how institutions taking part in the CPEPA program use their library websites to highlight and promote their areas of excellence. The study tries to analyse how the library websites ascertain the collection, facilities and services which is unique in the study.

4. OBJECTIVES OF THE STUDY

- To identify the university libraries under the CPEPA scheme through their websites.
- To determine what basic information is accessible on the Centre with Potential for Excellence in Particular Areas (CPEPA) library websites.
- To ascertain the collection, facilities, and services offered as depicted in their websites.
- To evaluate the user-friendliness, currency, accessibility, and accuracy of those library websites.
- To draw attention to the web 2.0 activities and applications that are displayed on library websites.

5. SCOPE AND COVERAGE

This research does a web analysis of the seventeen university libraries involved in the CPEPA initiative. The universities include:

Anna University; Annamalai University; Bangalore University; Devi Ahilya University; Guru Nanak Dev University; Himachal Pradesh University; Jai Narain Vyas University; Karnatak University; Mysore University; Osmania University; Punjab University; Rajiv Gandhi (Arunachal University); Rashtriya Sanskrit Vidyapeeth (National Sanskrit University); Sardar Patel University; University of Allahabad; University of Calcutta; University of Madras.

Though the website depicts eighteen universities, but it has been found that the name of Rashtriya Sanskrit Vidyapeeth appears twice in their website. (Centres (CPEPA), University Grants Commission, 2023)

6. METHODOLOGY

The study focused on the web survey of the university library websites of the Centre with Potential for Excellence in Particular Area (CPEPA) universities. The information was collected between August 25 and November 5, 2023. A comprehensive checklist has been developed by thoroughly examining existing literature and previous studies (Bharati and Margam¹¹, Hugar¹², Chowdhury and Das¹⁵, Rafiq, Ashiq, Rehman and Yousaf¹⁶, Bajpai and Verma¹⁷, Chakraborty¹⁸). This checklist synthesizes detailed information regarding the content of these library websites, including the classification of their URLs, accessibility of the websites, general information, service details, and use of Web 2.0 technology. Data gathered using the checklist was recorded and analysed in MS Excel.

7. ANALYSIS

The gathered information has been examined in light of the chosen study goals.

7.1 CPEPA University Libraries-An Overview

Table 1 reveals information about the universities under the Centre with Potential for Excellence in Particular area scheme of UGC. This table also contains the details about the university name, the university library names, the library establishment year, links to the library websites, potential areas of excellence, and the geographical location of the libraries; this is the introduction part of the universities and libraries of CPEPA.

The table shows that the University of Calcutta library is the oldest among these 17 CPEPA libraries, established in 1869. It is followed by the central library of Allahabad, set in the year 1872. Among all the libraries central library of Rajiv Gandhi University is the latest, established in 1984.

To expand the accessibility of the library website for the users URL extensions play a key role. Among these 17 universities.ac.in is the commonest URL, i.e. of the fourteen universities. Sardar Patel University and Anna University are the only two universities that have .edu as their extension in their URL. Only Jai Narain Vyas University has .co as the extension in its URL.

Seventeen CPEPA universities have seventeen different library names. Eleven libraries are after their university

name, whereas other libraries are named after the founder of the university/library, the first vice chancellor of the university and also on names of prominent personalities, i.e., Bhaikaka library was named after Shri Bhailalbhair Patel (Bhaiakaka) who established the library, Osmaniya University library (Dr. B.R. Ambedkar Library) renamed after the Father of Constitution, Punjab University named their library after A. C. Joshi the illustrious vice chancellor of the university. S.S. Basavanal Library was named in remembrance of Prof. S.S. Basavanal, who was one of the founder members of Karnataka University. The National Sanskrit University Library holds the name of Mahamahopadhyaya Sri Pattabhirama Sastri, the First Chancellor.

This table also represents the distribution of the number of universities under CPEPA. A total of seventeen universities are situated in 11 different states. Karnataka and Tamilnadu have three universities each, Andhra Pradesh and Punjab have two universities each, and Arunachal Pradesh, Gujarat, Madhya Pradesh, Rajasthan, Shimla, Uttar Pradesh, and West Bengal have one CPEPA university each. Some universities are sponsored by the state government and others are maintained by the central government²⁷⁻⁴⁴.

Table 1. Overview of the universities under the CPEPA scheme

S. No.	Name of university	Areas of focus	Library name	Library establishment year	Location of library	Library website
1	Anna University	Environmental Sciences	Anna University Library	1978	Chennai, Tamilnadu	http://library.annauniversity.edu/
2	Annamalai University	Advanced Study in Marine Biology in the faculty of marine Sciences	Dr. C.P. Ramamaswami Aiyar Library	1920	Annamalainagar, Tamilnadu	http://annamalaiuniversity.ac.in/
3	Bangalore University	Application of Molecular and Nano tools to study targeted drug delivery and cellular manifestations in disease management	Bangalore University Library	1966	Bengaluru, Karnataka	http://bangaloreuniversity.ac.in/
4	Devi Ahilya University	e-Management Studies	Devi Ahilya Viswavidyalaya Central Library	1964	Indore, Madhya Pradesh	http://lib.dauniv.ac.in/
5	Guru Nanak Dev University	Sports Sciences	Bhai Gurdas_ Library	1970	Amritsar, Punjab	http://library.gndu.ac.in/
6	Himachal Pradesh University	Himalayan Studies	H.P. University Library	1970	Shimla, Himachal Pradesh	http://hpuniv.ac.in/
7	Jai Narain Vyas University	Application of synthesis for characterisation, and Risk Assessment of Nano- particles on ecosystems of Thar desert	Jai Narayan Vyas Central Library	1962	Jodhpur, Rajasthan	http://jnvu.co.in

8	Karnatak University	Advanced materials for therapeutic, diagnostic, industrial and agricultural applications	Prof. S. S. Basavanal Library	1950	Dharwad, Karnataka	http://kudlibrary.ac.in/
9	Mysore University	Processing characterisation and applications of Advanced Functional nanomaterials	Mysore University Library	1918	Mysuru, Karnataka	http://uni-mysore.ac.in/
10	Osmania University	Bio-prospecting of certain important medicinal plants for Healthcare	BhatatRatna Dr B R Ambedkar Memorial Library	1918	Hyderabad, Telangana	http://osmania.ac.in/
11	Punjab University	Biomedical Science; Cultural Fixation on Honour: A Gender Audit of Punjab and Haryana; Application of Nano-Materials, Nanoparticles and Nano-Composites	A.C. Joshi Library	1947	Chandigarh, Punjab	https://library.puchd.ac.in/
12	Rajiv Gandhi (Arunachal University)	Biodiversity	Central Library Rajiv Gandhi University	1984	Itanagar, Arunachal Pradesh	http://rgu.ac.in/library/
13	Rashtriya Sanskrit Vidyapeeth	Traditional Shastras	Mahamahopadhyaya Pattabhirama Sastri Library	1956	Tirupati, Andhra Pradesh	http://nsktu.ac.in/
14	Sardar Patel University	Applied Polymers	Central library (Bhaikaka Library)	1964	Vallabh Vidyanagar, Gujarat	http://spuvvn.edu/
15	University of Allahabad	Behavioural Cognitive Sciences	Central library (University of Allahabad)	1872	Allahabad, Uttar Pradesh	http://allduniv.ac.in/
16	University of Calcutta	Electro-Physiological and Neuro-imaging studies including mathematical modelling	Calcutta University Library	1869	Kolkata, West Bengal	http://culibrary.ac.in
17	University of Madras	Development of Drugs from Medicinal Plants for Human Welfare Climate change and its impact on mangrove ecosystem in the region	Madras University Library	1907	Chennai, Tamilnadu	https://www.unom.ac.in/webportal/uploads/library/

7.2 General Information of the Centres with Potential for Excellence in Particular Areas (CPEPA) Library Websites

Table 2 and Figure 1 exhibits the general information contents of seventeen library websites listed under Centres with Potential for Excellence in Particular Areas (CPEPA). Some basic information is present in the tabular form. This information helps users to gain knowledge about the libraries in a single look. The information provided

in this table includes about the institution, the library, mission & vision, etc.

All the 17 universities provide information about institution, about the library, its Mission, and its Vision statement. 16 out of 17 universities provide information on library rules, library staff, library sections, and important web links, working hours & holiday lists. Only 15 universities reflect the information of LMS and Institutional Repository details.

Table 2. General information on CPEPA university libraries

Name of the university →	ALLDU	AU	ANMU	BU	DAU	GNDU	HPU	JNVU	KU	MU	OU	PU	ARU	NSKTU	SPU	CU	UM
Information																	
About institution	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
About library	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Mission & vision statement	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Library rules	1	1	1	1	1	1	1	0	1	1	1	1	1	1	1	1	1
Library staff	1	1	1	1	1	1	1	0	1	1	1	1	1	1	1	1	1
Site map/details	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Library Sections	1	1	1	1	1	1	1	0	1	1	1	1	1	1	1	1	1
Working hours & holiday	1	1	1	1	1	1	1	0	1	1	1	1	1	1	1	1	1
Important web links	1	1	1	1	1	1	1	1	1	1	0	1	1	1	1	1	1
Institutional repository	1	1	0	1	1	1	1	0	1	1	1	1	1	1	1	1	1
LMS	1	1	0	1	1	1	1	1	1	1	0	1	1	1	1	1	1

1 indicates Available and 0 indicates Not available

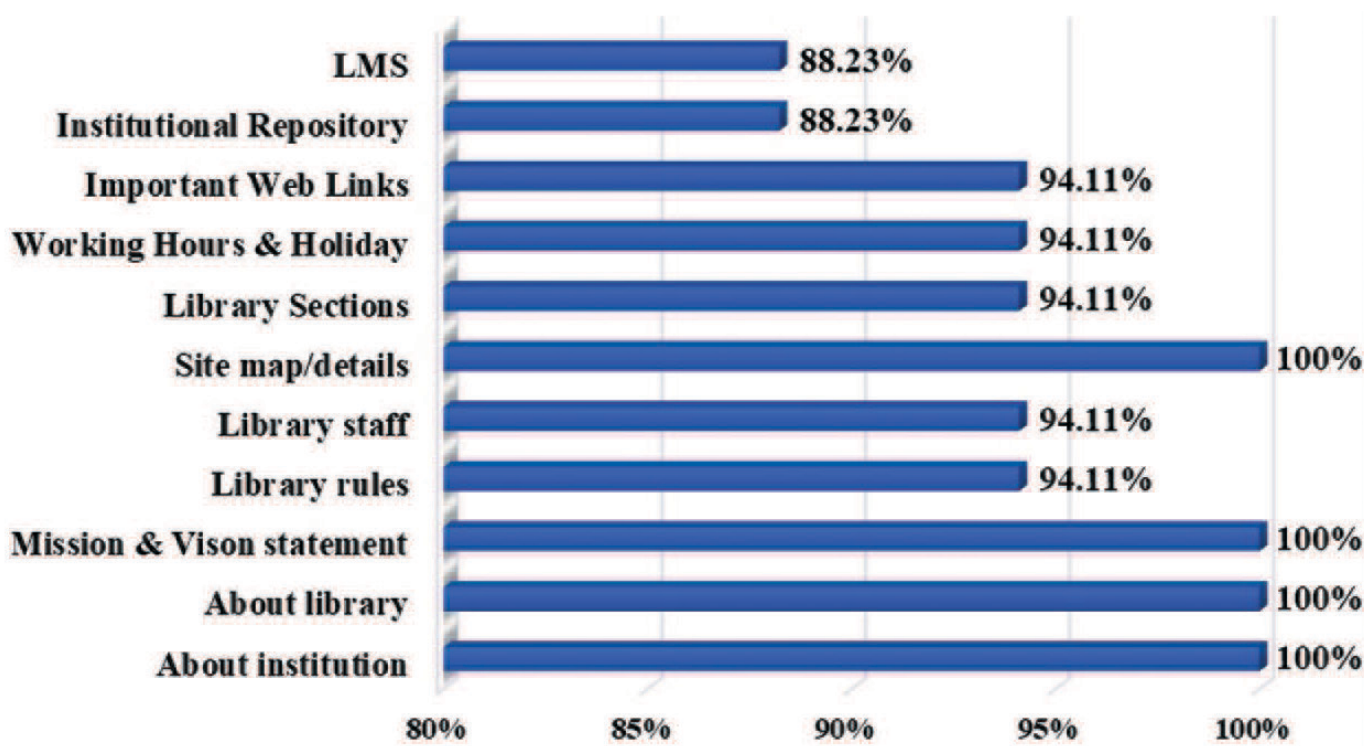


Figure 1. Percentage of general information items found on the website.

7.3 Library Collection of CPEPA Universities

In Table 3 and Figure 2, 17 CPEPA university library websites to access collection details of all the libraries is depicted, but Jai Narain Vyas University (JNVU) is not providing any detail on their website about their collection. For that reason, we excluded JNVU from this analytical study and we continued with the other 16 universities which come under

UGC’s CPEPA scheme. Only 14 item types are selected in this table to find out whether all the CPEPA university libraries are having similar library collections. To search out any special collection available related to the potential for excellence associated with the university this table is also making a way to analyse the percentage match available among similar collections.

Table 3. Library collection of CPEPA universities

Name of the university	ALLDU	AU	ANMU	BU	DAU	GNDU	HPU	JNVU	KU	MU	OU	PU	ARU	NSKTU	SPU	CU	UM
Items																	
Books	1	1	1	1	1	1	1		1	1	1	1	1	1	1	1	1
Reports	1	1	1	1	1	1	1		1	1	1	1	1	1	1	1	1
Theses	1	1	1	1	1	1	1		1	1	1	1	1	0	1	1	1
Conference proceeding	1	1	0	1	1	1	1		1	1	1	1	1	0	1	1	1
News Papers	1	0	1	1	1	1	1		0	1	0	1	1	0	1	1	1
Annual reports	1	0	0	1	1	1	1		1	1	1	1	1	1	1	1	1
References sources	1	1	1	1	1	1	1		1	1	1	1	1	0	1	1	1
Manuscripts	1	0	1	0	0	1	0		1	1	1	1	0	1	1	1	1
Publications	1	1	1	1	1	1	0	0	1	1	1	1	1	1	1	1	1
e-books	1	1	1	1	1	1	1	0	1	1	1	1	1	1	1	1	1
Journals	1	1	1	1	1	1	1		1	1	1	1	1	1	1	1	1
e-Journals	1	1	1	1	1	1	1		1	1	1	1	1	1	1	1	1
Coins	0	0	1	0	0	1	0		0	0	0	0	0	0	0	0	0
Materials for blind users	0	0	0	0	1	0	1		0	0	0	0	0	0	0	0	0

1 indicates Available and 0 indicates Not available

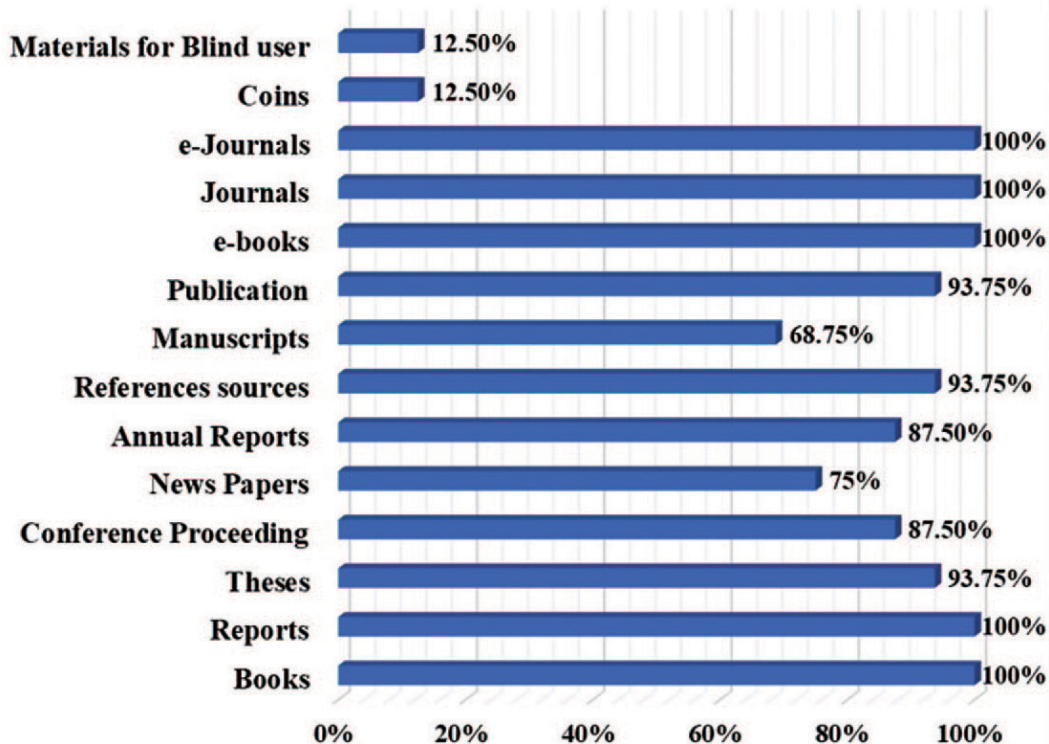


Figure 2. Collection available in CPEPA libraries.

100 % of the CPEPA university libraries provide details about Books, e-books, Journals, e-journals, and reports. 93.75 % of libraries are having Thesis, Reference sources, and institutional publications. 87.5 % of libraries and 68.75 % of libraries are having Conference proceedings and Manuscripts in their collection. Newspaper collections are available in only 75 % of libraries. Only 12.5 % of libraries are having collections of Coins and materials for blind users.

7.4 Library Services of CPEPA Universities

Table 4 reveals information about the CPEPA university library services. Different kinds of services are represented in a tabular form. This table is also containing 17 CPEPA university details but for a better analysis, we have to exclude JNVU for lack of details found on the website. Now we analysing 16 CPEPA university library service details which are shown in the table except JNVU.

This table contains analytical information on library services or online services through the website of the library. Figure 4 shows percentage of different library services delivered by the CPEPA Universities. Reference service, Web 2.0 services are provided by 100 % of university libraries under the scheme Centre with Potential for Excellence in Particular Area. Book lending service is provided by 100 % libraries. 93.75 % of universities provide information about e-library services. 87.50 % of

libraries provide bibliographic services and photocopying/printing services. 75 % of universities provide Remote access services and services to physically challenged students. 68.75 % and 43.75 % of libraries provide CD-ROM search and Digital document on-demand services respectively. 100 % of libraries provide Publication service, CAS and SDI service, or interlibrary loan facilities to the users. Only 6.5 % of libraries give Book reservation is services and 25 % of university libraries are providing reprographic services. Online book reservation offered by only one University, like the University of Allahabad. Reprographic service is provided by Guru Nanak Dev University, Mysore University, Anna University and National Sanskrit University (Rashtriya Sanskrit Vidyapeeth) libraries.

7.5 Accuracy, Accessibility, Currency, and User-friendliness of the Library Websites

Table 5 reveals that the users can acquire knowledge about the library, or its parent organisation, by checking notices, announcements, news, and events downloading question papers or other materials from the institutional repository, taking help, giving feedback, etc.

For satisfying users, every website needs to have a good user interface and retrieval system. This table shows the interfaces designed for the users in the CPEPA library websites.

Table 4. Facilities and Services offered on the CPEPA library website

Name of the university	ALLDU	AU	ANMU	BU	DAU	GNDU	HPU	JNVU	KU	MU	OU	PU	ARU	NSKTU	SPU	CU	NM
SERVICES																	
OPAC	1	1	1	1	1	1	1		1	1	1	1	1	0	1	1	1
e - library services	1	1	1	1	1	1	1		1	1	1	1	1	0	1	1	1
CD - ROM search	0	0	1	1	1	1	0		0	1	1	1	1	0	1	1	1
Bibliographic service	0	1	1	1	1	1	1		1	1	1	1	1	0	1	1	1
Reprographic services	0	1	0	0	0	1	0		0	1	1	0	0	1	0	0	0
Lending	1	1	1	1	1	1	1		1	1	1	1	1	1	1	1	1
Photocopying and printing	1	1	1	0	1	1	1	0	1	1	1	1	1	0	1	1	1
Inter library loan	1	1	1	1	1	1	1		1	1	1	1	1	1	1	1	1
SDI and CAS	1	1	1	1	1	1	1		1	1	1	1	1	1	1	1	1
Remote Access	1	1	1	1	1	1	0		1	1	0	1	1	0	0	1	1
Digital document on demand	0	0	1	0	0	1	1		0	0	1	1	0	0	0	1	1
PH Student service	0	0	1	1	1	1	1		1	1	1	1	1	0	0	1	1
Reference service	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Web 2.0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Online book reservation	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

1 indicates Available and 0 indicates Not available

Table 5. User accessibility and current search interface

Name of the university	ALLDU	AU	ANMU	BU	DAU	GNDU	HPU	JNVU	KU	MU	OU	PU	ARU	NSKTU	SPU	CU	UM
Downloads	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Notice/announcement	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Contacts	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Help	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
External & quick Links	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1-	1
Keyword search	1	0	1	1	1	0	1	0	0	0	0	0	0	0	1	0	0
Suggestion box / feedback	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
News/event	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Visitors /hits	1	0	1	0	1	0	0	0	1	1	0	0	1	1	1	1	1
Multi lingual interface	1	1	0	1	0	0	1	0	1	1	0	0	1	0	0	0	0
FAQ	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1

1 indicates Available and 0 indicates Not available

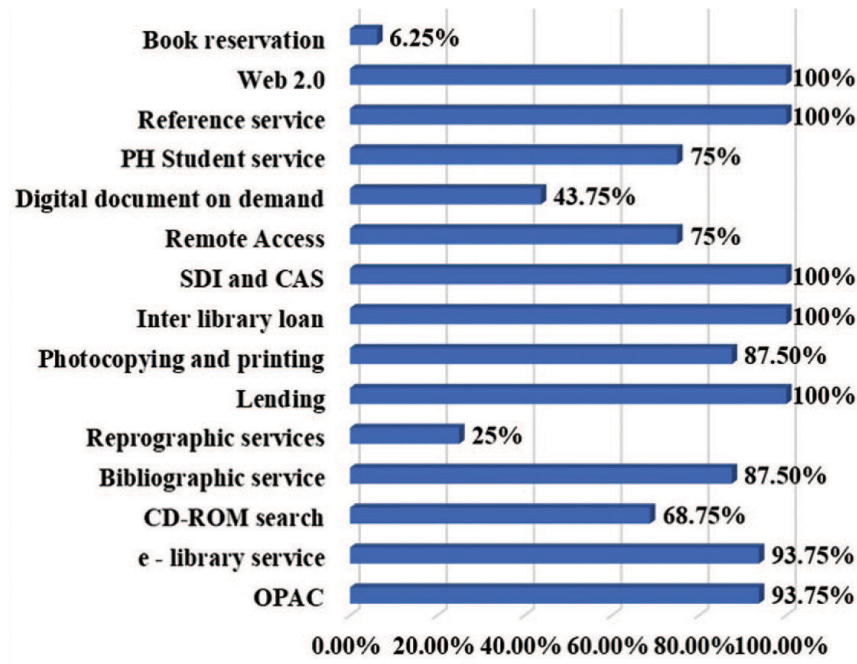


Figure 3. Percentage of library services of CPEPA universities.

This table reveals information on the CPEPA university library's user accessibility and interface-related information. Figure 4 shows that 100 % of CPEPA university libraries provide Download-related options, external and quick links, Instruction, Notice, and Announcement. Only 35.29 % of libraries are provided with Keyword search options and visitor-related details. 41.17 % of university libraries provide a multilingual interface. 47.05 % of universities provides FAQs. Contacts, Help, and feedback options are shared by 100 % of universities. Keyword search, multilingual interface, and Visitor/Hits related options are given by >50 % of Libraries, these two

options are representing a good library interface. FAQs are provided by different libraries in different methods, some libraries show them on the library website and other libraries gave it in pdf format.

7.6 Web 2.0 Application and Services on the Library Website

In the current internet age, Web 2.0 is commonly utilised in libraries. Web 2.0 allows libraries and users to make two-way communication remotely. So, every academic library is now taking advantage of technology and social media by implementing Web 2.0 applications.

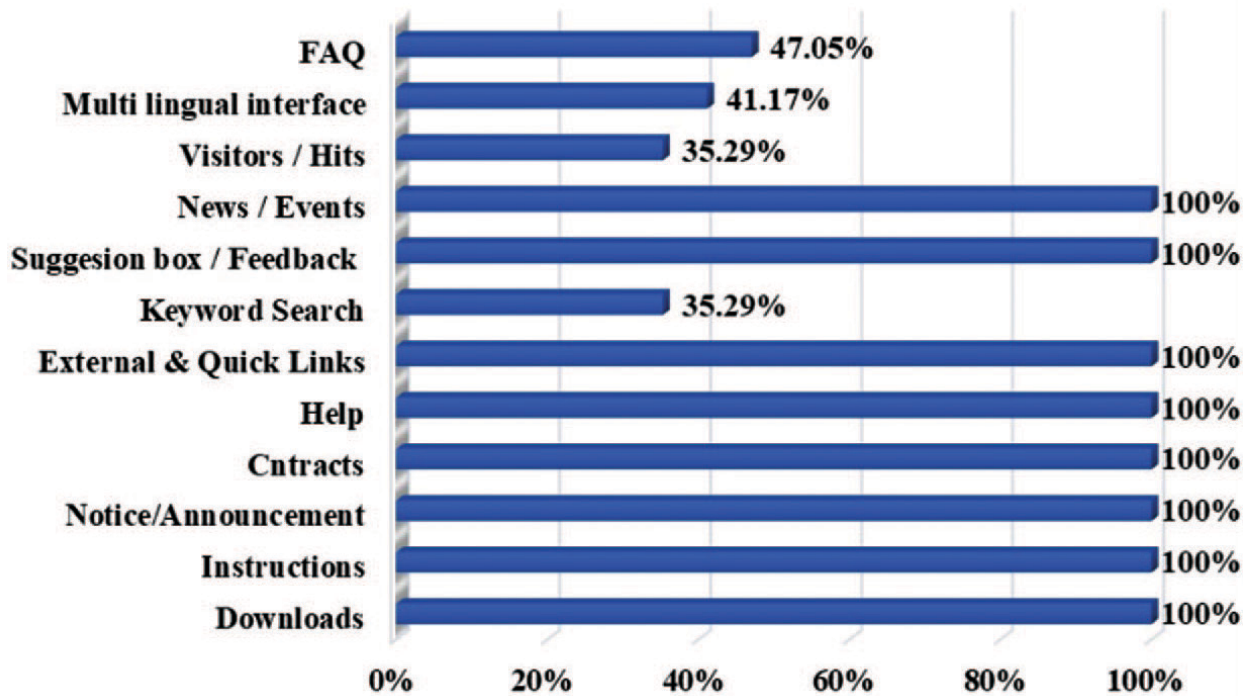


Figure 4. Percentage of user accessibility options found on the websites.

Table 6. Web 2.0 applications and services

S. No.	Name of University	Facebook	Twitter	You-Tube	Instagram	Whats App	Telegram	Linked in	Webmail	Wiki & blog
1	Allahabad University	1	1	1	1	0	0	1	1	1
2	Anna University	1	1	1	1	0	0	1	1	1
3	Annamalai University	1	1	1	1	0	0	1	1	1
4	Bangalore University	1	1	1	1	0	0	1	1	1
5	Devi Ahilya University	1	1	1	1	0	0	1	1	1
6	Guru Nanak Dev University	1	1	1	1	0	0	1	1	1
7	Himachal Pradesh University	1	1	1	1	0	0	1	1	1
8	Jai Narain Vyas University	1	1	1	1	0	0	1	1	1
9	Karnatak University	1	1	1	1	0	0	1	1	1
10	Mysore University	1	1	1	1	0	0	1	1	1
11	Osmania University	1	1	1	1	0	0	1	1	1
12	Punjab University	1	1	1	1	1	0	1	1	1
13	Rajiv Gandhi (Arunachal University)	1	1	1	1	0	0	1	1	1
14	Rashtriya Sanskrit Vidyapeeth	1	1	1	1	1	1	1	1	1
15	Sardar Patel University	1	1	1	1	0	0	1	1	1
16	University of Calcutta	1	1	1	1	1	0	1	1	1
17	University of Madras	1	1	1	1	0	0	1	1	1

1 indicates Available and 0 indicates Not available

Table 6 shows the number of social media platforms used by university libraries under the CPEPA scheme.

This table shows that Facebook, Twitter, YouTube, Instagram, webmail Wiki & blogs are operated by 17 out of 17 universities. Only NKSTU provides telegram accessibility for the public, whereas only 3 universities have open platforms for WhatsApp, other universities use these two social media privately.

Figure 5 shows 100 % universities use social media. Some of the social connectivity is restricted for the university personal groups but most of the platforms are open to all.

Devi Ahilya University and Himachal Pradesh University library. Only Annamalai University and Guru Nanak Dev University have coin collections. All library websites provide web OPAC, except JNVU and NKSTU.

The fourth objective reflects that most of the libraries have independent library website which is linked with University URL. Some universities like the University of Allahabad, Anna University, Bangalore University, Himachal Pradesh University, Karnataka University, Mysore University, and Arunachal University have bilingual interfaces, which help the users to access the entire website in more than one language.

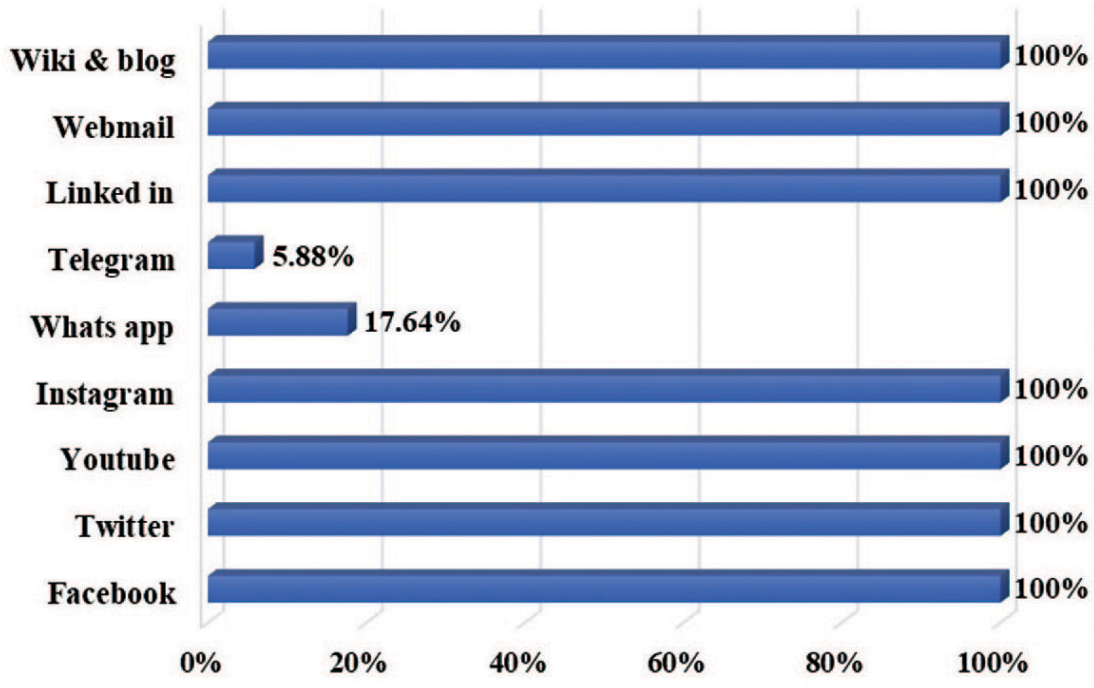


Figure 5. Social media uses of CPEPA libraries.

8. FINDINGS OF THE STUDY

The first and second objectives find 17 CPEPA universities in India. All library websites of CPEPA universities are accessible through web browsers. Seventeen universities have 17 different library names. 11 libraries are named after their university name, whereas other libraries are named after the founder of the university/library. Library rules, library history and working hours, and collection of such general information related to libraries are given on concerned university library websites.

The third objective derives that all library websites provide the e-journal and e-book links directly on the website, only Jai Narain Vyas university library and NKSTU university library does not provide links on the website. Most libraries have similar library collections, but some of them are century-old universities they have manuscripts, old coins, and other types of special material they have special collections. Among the universities, the library collection is not uniform. They are available according to the specialty of the Universities, for example, National Sanskrit University has palm leaf manuscripts, braille books, or other materials for blind students given by

The fifth objective determines that only 6 universities provide keyword search facilities i.e. University of Allahabad, Annamalai University, Bangalore University, Devi Ahilya University, Himachal Pradesh University, and Sardar Patel University. FAQ service is provided by only seven universities. Some libraries are providing institutional repository services among all. All university libraries under CPEPA provide web 2.0 services.

9. INTERPRETATIONS OF THE KEY FINDINGS

- (a) In all the seventeen universities the URL extension is divided into 3 categories- .ac.in is an academic extension found in 14 universities, another academic URL extension is .edu found in 2 universities, but Jai Narain Vyas University is running their website under the extension .co.in which is referred to as commercial URL. And JNVU still has no library website.
- (b) Most of the university library names are associated with the parent organisation. But still, some university libraries are named after their university founder to show respect to the person.

- (c) Library rules and working hours and the collection details are the general and essential information provided by every university.
- (d) NSKTU and JNVU do not have OPAC. JNVU does not have a working library website and the NSKTU library webpage is now under developing position and shortly may provide OPAC service.
- (e) Collections are not depicted in a specific format. Every individual university has its individual collections criteria.
- (f) CPEPA universities are unique in their particular domain, so this is another option for non-similarity in library collections. However, this collection figure does not influence the overall collection of the university.
- (g) Maximum CPEPA Universities are from South India or other different States. So, to give opportunities to both regional users and provide worldwide access, the universities develops multiple language interfaces.
- (h) Some university libraries provide Web 2.0 services including the social media platform. Several Web 2.0 platforms are used to give benefits like announcements, advertisements, sharing photos/videos, chatting, blogs, and helping services.
- (i) Keyword search is one of the finest collaborations with website development, only 6 universities provide this service.
- (j) External links or other useful links are available on the website of every university. These are useful for the user from various perspectives. But institutions must have institutional repositories to organise and store information when it's needed. Only 15 universities gives details of the library websites.

10. SUGGESTIONS

- (a) Libraries are the foundation of any organisation; they should also have their webpage. There needs to be a hyperlink from the university's homepage to the library's website.
- (b) The library website should provide detailed information on all of the library resources.
- (c) The library website needs to provide in-depth information on the available resources, library branches, and user services.
- (d) Libraries can better interact with their patrons if they provide details about the variety of services they provide on their websites. The content must be relevant to the services a library offers its users.
- (e) The library website should feature links to the E-resources it subscribes to and information about how to access them, as we are entering an era in which libraries are increasingly adapting to the digital environment by making their resources available in electronic format.
- (f) If there are any dead links, they should be removed from the library website.

11. CONCLUSIONS

The dissemination of information about library systems and services is facilitated by websites, which play an essential part in maximising the effective use of library resources. Websites for libraries serve to close the gap between patrons and the institution. Since the library environment is gradually shifting from physical to digital, creating a website for the library is the only method to include information about the library in a more efficient and eye-catching manner that can be accessible 24*7 from any physical location. This research source provides a summary of the information found on all the CPEPA University's library websites. Most university websites offer every service that a user would need to find an answer to their question. It is also noted that visiting the university libraries' websites is a useful way to find out what resources are or are not available there. The overall conclusion highlights the needs for ongoing enhancement and development of library websites to better meet the evolving needs of users in digital environment. This indicates a call to action for CPEPA universities to prioritise website improvements and ensure comprehensive online access to library resources.

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