Role of University Knowledge Resource Centres in Achieving Sustainable Development Goals (SDGs): A Case of India

Shipra Awasthi¹, Anup Kumar Das², Manorama Tripathi^{1,*}

¹Dr. B.R. Ambedkar Central Library, Jawaharlal Nehru University, New Delhi, INDIA. ²Centre for Studies in Science Policy, School of Social Sciences, Jawaharlal Nehru University, New Delhi, INDIA.

ABSTRACT

This study delves into the potential role of university libraries/ Knowledge Resource Centres (KRCs) in India, emphasising their contribution to achieving the Sustainable Development Goals (SDGs). Libraries, recognised as hubs of information and knowledge, have adapted to incorporate technological innovations, extending their services beyond physical boundaries. University library services significantly contribute to advancing the SDGs by promoting community engagement, fostering digital inclusion, bolstering education, and ensuring equitable access to information. The study thoroughly reviews pertinent literature, assesses ongoing initiatives aimed at SDG fulfilment, explores how university KRCs support the SDGs, and provides a case study focusing on India. The paper offers a range of recommendations for university KRCs and stakeholders, outlining strategies to effectively harness library services in furthering the objectives of SDGs.

Keywords: Academic Libraries, Knowledge Resource Centre, India, Sustainable Development Goals, SDGs, Digital Divide, Higher Education, KRCs, Accessibility.

Correspondence:

Dr. Manorama Tripathi

Dr. B.R. Ambedkar Central Library, Jawaharlal Nehru University, New Delhi, INDIA.

Email: manoramatripathi2@yahoo.com

Received: 15-04-2025; **Revised:** 24-06-2025; **Accepted:** 04-08-2025.

INTRODUCTION

The Sustainable Development Goals (SDGs), often referred to as the Global Goals, represent a set of 17 interconnected objectives adopted by the United Nations in 2015. These goals serve as a worldwide rallying call to eliminate poverty, safeguard the environment, and ensure prosperity for all by the year 2030. They build upon the earlier Millennium Development Goals (MDGs) but encompass a broader spectrum of sustainable development's social, economic, and environmental dimensions. The SDGs are designed to guide international efforts to address some of the most pressing global challenges.

These 17 global goals have been embraced by all 193 member states of the UN, including India, which is the world's fifth-largest growing economy. At the heart of each of these 17 goals is a commitment to staying informed and up-to-date. This implies that individuals must have access to the latest, credible Information to engage in informed decision-making. University libraries, also popularly known as the Knowledge Resource Centres (KRCs), play a pivotal role in facilitating this access to Information.

DOI: 10.5530/jcitation.20250215

${\bf Copyright\ Information:}$

Copyright Author (s) 2025 Distributed under Creative Commons CC-BY 4.0

Publishing Partner: Manuscript Technomedia. [www.mstechnomedia.com]

Throughout history, university KRCs have consistently played a vital role in disseminating and providing accurate information to their users. They serve as crucial agents in the implementation of SDGs for the betterment of humanity. This paper aims to highlight both government policies and initiatives, as well as the activities of university libraries, that contribute to the advancement of SDGs. By focusing on policies, initiatives, and library-driven efforts, the paper aims to underline the pivotal role of libraries in achieving SDGs and their significant contribution to the well-being of societies.

Sustainable development is characterised by the responsible use of natural resources to ensure their preservation for future generations. It is defined by Burges (2015) as meeting the needs of both present and future generations by integrating environmental protection, social advancement, and economic prosperity (Burges, 2015, as cited in Mansour, 2020). India actively pursues the UN-SDGs through various government initiatives. These programmes span multiple sectors and simultaneously address several SDGs.

India's commitment to the SDGs is evident in various government projects, including flagship initiatives such as Swachh Bharat, Make in India, Skill India, and Digital India (David, 2018). The United Nations Educational, Scientific, and Cultural Organisation (UNESCO) plays a pivotal role in directing and coordinating the Education 2030 initiative, which encompasses 17 SDGs aimed at





transforming the global landscape (Jha and Kampa, 2022). Global Goal 4 (SDG4) of the 2030 Agenda for Sustainable Development, adopted by India in 2015, focuses on "ensuring inclusive and equitable quality education and promoting lifelong learning opportunities and outcomes."

Several significant government programmes in India align with specific SDGs

Swachh Bharat Mission (SDG6)

This initiative aims to eliminate open defecation and provide clean and safe sanitary facilities, promoting sanitation and hygiene by constructing millions of toilets. India has significantly reduced open defecation rates and expanded access to sanitation facilities (source: www.pmindia.gov.in/en/major_initiatives/swachh-bharat-abhiyan/).

Mid-Day Meal Programme (SDGs 1, 2, 3, and 4)

This programme offers free lunches to schoolchildren, encouraging regular attendance, improving nutrition, addressing hunger, and promoting school enrollment and retention (source: www.akshayapatra.org/indias-mid-day-meal-scheme).

Beti Bachao, Beti Padhao (Save the Girl child, Teach the Girl child) (SDG 5)

This programme raises awareness about female foeticide, encourages girls' education, and promotes gender equality through various initiatives, awareness campaigns, and financial incentives (source: Wcd.nic.in/schemes/beti-bachao-beti-padhao-scheme).

National Food Security Act (SDG 2)

This government initiative subsidises food grains to approximately two-thirds of the population, ensuring food security for vulnerable and low-income households (source: nfsa.gov.in/portal/nfsa-act).

National Solar Mission (Jawaharlal Nehru National Solar Mission) (SDG 13)

This programme seeks to increase India's adoption of solar energy, reduce reliance on fossil fuels, and achieve ambitious goals for solar power generation, significantly advancing solar energy infrastructure (source: www.iea.org/policies/4916-jawaharlal-ne hru-national-solar-mission-phase-i-ii-and-iii).

Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA) (SDGs 1, 8)

This initiative provides rural employment and acts as a safety net during challenging agricultural seasons, fostering inclusive growth (source: Nrega.nic.in/MGNREGA_new/Nrega_home. aspx)

These government projects in India reflect a solid commitment to achieving the SDGs by addressing critical social, economic, and environmental challenges. MyScheme.gov.in is a national platform which acts as a one-stop search and discovery of 1070 schemes across different sectors.

With the world's second-largest population, India is poised to play a significant global role in the 21st Century. To achieve this, it must adopt a fair and inclusive approach. India's journey towards development is greatly influenced by the National Education Policy of 2020 (Chakrabarty and Kaur, 2021).

Libraries in India play a pivotal role in realising the SDGs. These institutions promote education, facilitate information access, and foster community development. University KRCs often serve as inclusive spaces, particularly benefiting marginalised groups such as women, children, people with disabilities, and rural populations. They offer tailored programmes and services, including literacy initiatives, vocational training, and awareness campaigns on topics such as health, gender equality, and human rights.

As evidenced by the International Federation of Library Associations and Institutions (IFLA), libraries worldwide are actively aligned with the SDGs. They promote innovation, creativity, and global information access, making them essential partners in inclusive and sustainable development. Libraries contribute significantly to environmental sustainability (SDG 13) by providing resources and programmes related to climate change, renewable energy, conservation, and eco-friendly practices. Through workshops, lectures, and awareness campaigns, libraries educate the public and encourage sustainable behaviours (Sivankalai, 2021).

University KRCs support academic research by offering essential resources for student coursework and scientific study. University librarians play a crucial role in educating both library patrons and staff. University KRCs break down physical boundaries, ensuring flexible access to educational resources and materials. They promote learning and skill development, fostering personal growth. In an increasingly digital world, university KRCs facilitate access to Information and Communication Technology (ICT) infrastructure, bridging the digital divide and enhancing connectivity, especially in underserved areas.

Study Objectives

The study is guided by the following research objectives:

- To highlight how university KRCs in India can play a pivotal role in achieving SDGs,
- To explore the initiatives taken to pave the way in meeting the SDGs,
- To investigate the access-based services provided by the university libraries,
- To discuss the contributions of the Jawaharlal Nehru University library as a case study in achieving SDGs.

Research questions

RQ1: How does the Government of India contribute to advancing the SDGs?

RQ2: What resources and services do the university KRCs provide to support SDGs?

RQ3: How does the Central Library of Jawaharlal Nehru University support SDGs?

METHODOLOGY

This study encompasses a review of initiatives in India aimed at achieving the SDGs and includes a case study focusing on the Central Library at Jawaharlal Nehru University (JNU). Established in New Delhi under the JNU Act of 1966, this publicly-funded university comprises fourteen schools of studies and nine special centres offering diverse programmes in the fields of sciences, social sciences, and humanities at the graduate, postgraduate, and doctoral levels. These academic units maintain a strong commitment to upholding high academic and research excellence standards. The JNU community includes over 600 faculty members, 9,000 students, and 1,200 non-teaching staff.

This study adopts an exploratory approach, combining a review of relevant literature with a detailed case study. The literature review draws upon sources from the Social Science Citation Index (SSCI) of Web of Science, a comprehensive bibliographic and citation database provided by Clarivate Analytics. The SSCI has over 10 million records from over 3500 journals across 47 subject categories. The keywords of Sustainable Development Goals and university KRCs were used to retrieve relevant literature.

The case study has specifically examined the contributions of the Central Library at JNU to the SDGs. Notably, JNU achieved the second rank in the NIRF (National Institute Ranking Framework) 2023 Ranking in the University category and secured a ranking of 601-650 in the QS World University Ranking 2023. The university's library has made substantial contributions towards advancing the SDGs through various initiatives and practices. The Central Library at JNU is regarded as a model for other libraries across India.

This article aims to enrich the existing literature on the efforts undertaken by university KRCs in India to align with and contribute to the achievement of the SDGs.

Focusing on the Central Library of Jawaharlal Nehru University provides a comprehensive understanding of its challenges, successes, and strategies, which can serve as a model for other libraries to emulate. It underscores the tangible impact that libraries can have in advancing the SDGs and promoting social responsibility. These findings are likely to be compelling for all stakeholders involved. The present study can be used as a benchmark for other libraries, enabling them to compare their own efforts in supporting the SDGs. This, in turn, can inspire

university KRCs to accelerate their sustainability initiatives and adopt best practices. Furthermore, this study contributes significantly to the expanding body of literature on the role of university KRCs in sustainable development. It plays a crucial role in documenting successful practices and the challenges libraries face. The university library website describes the services (lib.jnu. ac.in). The authors are involved in implementing and extending these services.

A survey of 50 central universities in India was also conducted to explore the access-based services provided to users. The survey was conducted to ascertain the services provided by the universities in the central library, India to meet SDGs.

RQ1 How does the Government of India contribute to advancing the SDGs

The government plays a crucial role in advancing SDGs by initiating and promoting different schemes for the welfare of society. Several initiatives have been taken up, which are as follows:

Initiatives of the Government of India to achieve SDGs

The G-20 summit, convened in New Delhi during 9-10 September 2023, centered on the theme of "One Earth, One Family, One Future." During this summit, the G-20 reiterated its commitment to accelerate efforts towards implementing the 2030 Agenda for Sustainable Development.

The G-20 Delhi Declaration strongly emphasizes advancing quality education with a focus on equity, adaptability, and collaboration to ensure inclusive access to education for all. The declaration recognizes the pivotal role played by foundational learning and digital technologies in bridging the digital divide among learners.

Furthermore, the Declaration underscores the need to broaden access to high-quality technical and vocational education and training, acknowledging their importance in preparing individuals for the evolving workforce. In line with this, there is a notable emphasis on the concept of lifelong learning, encompassing skilling, reskilling, and upskilling, as a means to empower individuals and foster their continuous development. The University Grants Commission (UGC) hosted the G20 University Connect Event in New Delhi on 26 September 2023, following Pondicherry University's G20 University Connect event on 23 January 2023. India has the potential to play a significant role on the global stage. India's strengths, including the National Education Policy, cultural diversity, and multilateral approach, position it as a trusted partner from the global south. India can promote harmony, optimism, and trust by drawing on its traditional beliefs and considering the world as one united entity, aligning with the theme of "One Earth, One Family, and One Future."

The G-20 Chief Science Advisers' Roundtable (G20 -CSAR) has deliberated upon efforts for better disease prevention, control and pandemic preparedness to expand access to scholarly scientific knowledge, to ensure diversity, equity, inclusion and accessibility in the Science and Technology ecosystem, to create an inclusive continuous and action-oriented global science advice mechanism.

The President of India has launched the 'Ayushman Bhava' campaign to enhance universal health coverage. The Government aims to ensure accessible and affordable healthcare facilities for the disadvantaged and marginalized sections of society. The campaign intends to spread awareness about essential health schemes and diseases that may be controlled.

The government has underlined the potential of digital public infrastructure to promote industries and trade and generate job opportunities. Digital public infrastructure refers to interconnected digital systems built on open standards and governed by legal frameworks. The digital systems are designed to provide easy and inclusive access to a spectrum of services, propelling development innovation and competition while ensuring respect for freedoms, privacy, and data protection.

India has proposed that a Global Digital Public Infrastructure Repository (GDPIR) be set up to bridge the gap in knowledge sharing. The "India Stack" model has revolutionized the health, agriculture, manufacturing, and education sectors, thereby creating a ripple effect of industry growth and job opportunities.

Gender Equality and Empowerment of Women

The Government of India passed a women's reservation bill to reserve 1/3 (33%) of the total number of seats in state legislative Assemblies and Parliament for women.

The Prevention of Sexual Harassment at Workplace (Prevention, Prohibition and Redressal) is a legislation passed by the government in 2013 to address the issue of sexual harassment that women face at the workplace. The Act aims to ensure a safe and conducive work environment for women and provide protection against sexual harassment.

The government aims to engage a workforce that reflects gender equality, which is spelled out in the advertisements for vacancies in government institutions. The Indian women's blind cricket team won a gold medal at the IBSA World Games by defeating Australia. Cricket for the visually challenged made its debut in the International Blind Sports Federation World Games this year.

The Ministry of Women and Child Development celebrated September 2024 as a month of National Nutrition Month with a call for nationwide participation in the endeavor towards a "Suposhit Bharat" (Nutrition-rich India). The primary objective of Poshan Maah 2024 was to comprehensively combat malnutrition. The focal point of Poshan Maah 2024 was to cultivate widespread

awareness regarding critical stages of human life: pregnancy, infancy, childhood, and adolescence.

National Educational Technology Forum

The National Educational Technology Forum (NETF) is a self-governing organization that is intended in accordance with National Education Policy 2020 to provide a forum for the open exchange of ideas on the use of technology to improve learning, assessment, planning, administration, and other areas, including for both higher and school education. The NETF's goal is to make it easier for leaders of educational institutions, state and federal governments, and other stakeholders to make decisions about the introduction, deployment, and use of technology by giving them access to the most recent knowledge and research as well as the chance to network and exchange best practices. (source: education.gov.in/sites/upload_files/mhrd/files/upload_document/NETF.pdf).

National Educational Alliance for Technology

As a public-private partnership model between the Government (via its implementing body AICTE) and the education technology companies of India, the Ministry of Education has launched the National Educational Alliance for Technology (NEAT). Companies are asked to present their goods on a national portal created for learners through an open invitation and screening process, and learners may purchase them depending on their needs. NEAT's mission is to provide students with easy access to the most advanced technology products in educational pedagogy on a single platform. Artificial Intelligence (AI)-based technology products for customized learning or e-content with highly marketable abilities in specialized fields will be provided and showcased on the platform (source: Neat.aicte-india.org/ aboutNeat).

Both NETF and NEAT focus on technology and education in India, but they have different roles and objectives. NETF primarily serves as a platform for knowledge exchange and research in the field of educational technology, while NEAT serves as a marketplace for educational technology products and operates as a partnership between the government and technology companies.

E-Basta

In Hindi, "basta" refers to a school bag. As the name implies, an e-Basta is a digital schoolbag containing study materials and digital copies of textbooks (Mani, Thirumagal, and Vanitha). EBasta allows the digitalization of textbooks to be read and utilized on tablets and laptops. The primary goal is to unite different schools and publishers (both free and paid) on a single platform.

The Indian Government also supports the use of technology in education, and it has encouraged most educational institutions to

transition from using blackboards to using digital boards. In order to expand computer-based education and interactive learning, the E-Basta programme was launched in 2014. The plan aimed to relieve children of the burden of hauling books to high school (Chokshi, 2022). The Scheme's goal is to quickly cover all public secondary and higher secondary schools, focusing on those in educationally underdeveloped blocks and neighbourhoods with high concentrations of SC/ST/minority/ economically weaker sections. Authorized school teachers can create course materials, textbooks, and electronic books for each class on the e-Basta site in accordance with the requirements of the school. For classes 1 through 12, the National Council of Educational Research and Training (NCERT) has 329 textbooks available on e-Basta in the following languages: Hindi, English, Urdu, and Sanskrit. Few schools have begun putting their course materials and syllabi online for students to download to their computers, tablets, and phones (source: www.education.gov.in/sites/upload_files/mhrd/ files/upload_document/ebasta.pdf).

Various other initiatives are taken for teachers and students to integrate ICT in education, teaching, and learning, such as Swayam Prabha, E-Granthalaya, Digital Sakshrata Abhiyan (DISHA), Sala Sarathi, National Super Computer Mission, Shaala Darpan, Sugam Pustakalya, National Knowledge Network, Shala Siddhi and National Scholarship (Gorai, 2021).

National Data Sharing and Accessibility Policy (NDSAP)

On March 17, 2012, the union cabinet was presented with the "National Data Sharing and Accessibility Policy (NDSAP)" by the Government of India (GOI). In February 2022, the "Draft India Data Accessibility and Use Policy (2022)" was published. Both policies asserted that, with certain exceptions, all data generated, gathered, and maintained by all government ministries and departments should be available for public access and sharing. They said that researchers embrace open data, particularly in the fields of science and technology, and that this will reduce the need for duplicate study results. Metadata standards will be governed and enforced by the India Data Office (IDO) and the Indian Data Council (IDC) (Nehra and Bansode, 2023). The preservation of research data continues to be of utmost importance for India's social, economic, and scientific progress (source: Dst.gov.in/national-data-sharing-and-accessibility-policy-0).

RQ2 What resources and services do the university KRCs provide to support SDGs?

Role of University KRCs in India providing access-based services

In India, university KRCs are essential for giving people access-based services. These services are crucial for fostering a culture of lifelong learning, teaching, research, and information dissemination.

University KRCs that offer resources, tools, and services that enable patrons to access data and documents physically or electronically are considered to provide access-based services. These services are designed to improve library materials' availability and accessibility in academic and research endeavours. University KRCs provide free or affordable access to various information resources, including books, journals, digital materials, and internet connectivity. This helps bridge the digital divide and ensures that individuals, especially those in underserved communities, have access to vital information for education, research, and decision-making.

Many university KRCs in India now provide access to e-databases, e-books, e-journals, and multimedia materials as a result of the use of digital technology. Academic libraries frequently offer specialized research support services and include assistance with literature searches, online database access, citation management tools, and interlibrary loan services. These services are priceless for researchers and students. University KRCs provide educational programmes, workshops, and training sessions to improve patrons' information literacy and digital abilities. This enables people to utilize existing resources as efficiently as possible. Cultural events, reading clubs, storytelling sessions, and other community-building events are frequently organized by university libraries. These programmes encourage reading and lifelong learning while also contributing to the cultural enrichment of local communities.

Mobile libraries are crucial in offering resources to various disadvantaged user groups and in giving individuals with limited access to educational resources and reading programmes the chance to thrive in their communities. Mobile libraries not only provide their users age- and content-appropriate materials and alternative literacy programmes, but they also establish new venues for social interaction for people of the community who may be dispersed, lonely, or physically unable to travel far from home (Lo and Stark, 2021). It is a top priority for many university KRCs in India to give disadvantaged and marginalised individuals access to information and resources. They provide services, including free internet access, help for those who are blind, and outreach initiatives to advance literacy.

Government documents are generally more challenging to locate than other published materials because of their high quality and the classification schemes used to organize them (Wallace, 2019). Public access to significant government publications and data is often made possible through libraries, which frequently act as custodians of this material, encouraging openness and responsibility. University KRCs in India make it possible for people to access literature produced in other languages, enabling academics and students to access global knowledge and study. They work with other institutions through consortiums, interlibrary loan programmes, and resource-sharing networks.

The library website provides access to a wide range of library resources and services, including e-journals, online databases, Web OPAC, new additions, and any other static information on library services. This website is sometimes called a portal (Kanamadi and Kumbar, 2006). University KRCs offer full-text, peer-reviewed papers and online research resources. Students can tour the library space and collections or conduct an online search of the library's contents using the catalogue and database search engines provided on the library's website. Authorized users can access online databases, and remote access software can be used to access the same outside the institution's premises (Wilmot and Hocker, 2017).

In India, libraries play a significant role in providing access-based services supporting community growth via education, research, and cultural enrichment. They are essential in fostering information access and literacy, encouraging lifelong learning, and bridging the digital divide between those with resources and the rest of society.

University KRCs in India Support SDGs

University KRCs in India play a crucial role in supporting the SDGs in various ways

Information poverty remains a critical issue for societies today. Marcella and Chowdury, (2018) shared the four essential dimensions of information poverty for collaborative future research- (1) Leveraging information as a tool for combating poverty; (2) identifying the causes of information poverty; (3) developing and producing initiatives to do away with information poverty; and (4) developing a more profound comprehension of regions of extreme disadvantage and information needs. Mia, (2020) in a study, found that information is the key to attaining sustainable development, but information poverty is a barrier. University KRCs play a pivotal role in minimising information poverty by offering a continuously changeable information resource for the community.

University KRCs can contribute to SDGs 2 and 3 by repackaging agricultural and health knowledge in accessible forms and languages that rural populations would comprehend. In order to provide extension services to their host communities, university KRCs can also work in partnership or collaboration with agricultural and health specialists (Nyantakyi-Baah *et al.*, 2020). The boosting of health literacy in poor economies might help with SDG-3 because it has been related to promoting optimal wellness in society. By actively promoting access to quality information, literacy skills, and lifelong learning for individuals, communities, and practitioners, libraries in developing countries help mitigate the impact of the poor resource status of their healthcare system on health literacy (Popoola, 2019). According to Bangani and Dube (2023) the community engagement strategies of academic libraries may be successfully aligned with the SDGs, especially

SDG 2 (No to Hunger), SDG 3 (Health and Well-Being of Communities), and SDG 13 (Climate Action).

SDG4 on quality education seeks to "ensure inclusive and equitable quality education and promote lifelong learning opportunities for all". University KRCs play a significant role in providing quality education by offering access to information and organizing literacy programmes (Bangani and Dube, 2023). University KRCs are equipped with the latest technologies providing access to information to regular users anytime, anywhere. Assistive technologies are deployed in the libraries to serve disabled users and create learning opportunities for them. Ignoring a library may be detrimental to a growing institution since it is essential to fostering its patrons' entire intellectual and emotional growth (Mahmood, 2021). University KRCs greatly aid the information literacy skills among students, professors, and researchers. University KRCs support SDG 4 by educating people on assessing and utilising Information critically. Atta-Obeng and Dadzie (2020) expressed in their paper that by offering access to pertinent information, providing instruction on research publications, and providing training in search strategy, communication skills, information literacy, and reading, academic institutions greatly contribute to lifelong learning.

University KRCs also contribute to SDG 13 by taking up environmental literacy initiatives. Kurbanoğlu and Boustany (2014) expressed that by incorporating sustainable thinking into information literacy, university KRCs may promote ecological literacy. This involves using eco-friendly practices in IL training by restricting the distribution of printed flyers and training materials, printing just as needed, utilizing recycled paper, and printing on both sides of the paper. Abiolu and Okere (2012) have implored librarians to be creative, interact with other NGOs and community groups, and contribute to creating and preserving an ecologically aware population.

Educational Landscape of India

University Library services can play a crucial role in bridging the education gap by providing equitable access to educational resources and opportunities. It gives people access to various educational resources, especially those in underprivileged regions or with restricted physical access to educational institutions. This includes e-books, e-journals, research databases, and multimedia resources. Libraries address the gap in educational resources and encourage self-directed learning by giving users access to these resources. University KRCs must continue establishing their online presence and offering Internet access within the building to accommodate the rising number of online users. They must also make some of their services remotely accessible online. The Internet has revolutionized scholarly publishing by enabling remote access to verified, high-quality, free electronic materials and Open Access publications subject to academic peer review (Gbaje, 2007).

Libraries can collaborate with educational institutions or provide online learning platforms and programmes. These platforms allow users to access quality education remotely, irrespective of their geographical boundaries. Online courses assist in bridging gaps in education by covering different subjects and skill development areas. The library supports virtual tutoring and mentoring programmes. In order to offer online tutoring and mentoring sessions to children who require more help, university KRCs can work with educators, professionals, and volunteers. Personalised assistance and mentoring to learners, especially those who encounter educational challenges, assist in bridging the gap.

Bridging the education gap also involves addressing the digital divide and enhancing digital literacy skills. To help people explore online resources, use technology, and acquire essential digital skills, university KRCs can provide training programmes in digital literacy. Remote access services help people become more digitally literate so they can benefit fully from online learning possibilities. Collaboration and knowledge exchange among educational institutions, libraries, and stakeholders in education becomes more accessible through remote access services. Through collaboration, university KRCs may pool their resources, knowledge, and best practices to create innovative educational projects. This collaboration helps bridge the education gap by leveraging collective efforts and resources.

University KRCs can promote inclusive learning environments. They can concentrate on offering assistive technologies, accessible formats, and resources mainly created for various learning requirements in order to make educational resources accessible to people with disabilities.

National Education Policy (NEP) 2020: Role of Libraries

The SDGs set forth by the UN are the foundation for NEP 2020. Furthermore, it placed a strong focus on lifelong learning and included provisions for various entry-exit points to allow students to finish their education at any point in their lives (Kumar, 2021). In order to achieve the intended sustainable aim, the Indian Government established the New Education Policy (NEP) in 2020 since the current educational system was insufficient. The educational ecosystem must be transformed to promote India's growth and development and fulfil its duties, particularly to reach SDG 4 of the UN Agenda for Sustainable Development by 2030 (Kauray, et al., 2021).

After extensive research and development on the previous educational policy and the present educational needs of society, the Ministry of Human Resources and Development of the Government of India released the NEP 2020. To achieve a 100% Gross Enrolment Ratio at the school level, the NEP 2020 strongly emphasises the universalisation of education (Cholin

and Naik, 2022). NEP specifies that libraries should provide all the amenities patrons might reasonably anticipate. University KRCs may undoubtedly significantly improve the research efforts of organisations. Offering high-quality resources, emphasising e-resources, assistance with reference management, and support with information retrieval, libraries, and information centres may ignite the passion of researchers. In this regard, specialised librarianship might be beneficial (Bapte, 2022).

In accordance with the NEP 2020, the Government of India will support libraries and ensure that there is the necessary staff in place to accomplish the goal of creating new library facilities or improving those that already exist in order to meet the needs of all types of readers throughout the nation (Asif and Singh, 2022). Prioritising online learning will help us reach the NEP 2020 target of 50% GER by 2035. Some conventional institutions have registered for twice as many ODL courses (Sivankalai, 2021).

Massive Open Online Courses (MOOCs) and Open Educational Resources (OERS)

Massive Online Open Courses (MOOCs) is an open online educational tool for attaining SDG 4 and investigating new educational opportunities to educate people and aid in the growth of their communities (Sosa-Díaz and Fernández-Sánchez, 2020). Libraries can take the lead and offer direction when advising faculty members and students about open access, Open Educational Resources (OER), copyright issues, and other licensing models in higher education through MOOCs. MOOCs have evolved into a tool for librarians' professional growth, giving them a chance to increase their impact in the educational environment (Ecclestone and Massis, 2013 in Santos-Hermosa, 2018). MOOCs may present an opportunity to demonstrate the value and advantages of open access, as university KRCs have been doing for years. In the era of MOOCs, maintaining adequate network connection is a crucial necessity that libraries should take into consideration. They must also have the necessary technological infrastructure to run a MOOC (Kendrick and Gashurov, 2013 in Santos-Hermosa, 2018).

The OERs are open to all, free for all, can be modified by all, and are reusable, subject to license. UNESCO gave the term OERs in 2002. OERs are learning, teaching, and research materials in any format and medium that reside in the public domain or are under the copyright released under an open license that permits no-cost access, re-use, re-purpose, adaptation, and redistribution by others.

OER's primary function as a teaching tool gradually gives way to one as a learning resource. This reflects the larger shift from a teacher-centered to a learner-centered approach to education. Students now make up the majority of OER users, not instructors or educational institutions, as was once the case (Kanwar *et al.*, 2010).

The benefit of OER content is its availability to a wide range of audience and accessible anytime, anywhere. The content can be customised according to the requirement making it more flexible to navigate and utilise without consuming more time. The OER content can be rapidly disseminated effortlessly owing to the digital format. OER content is not free from the challenges of authenticity and reliability as the content is open and can be modified, and its accuracy can be tempered (Jha and Kampa, 2022). OERs can significantly contribute to closing the nation's digital divide by giving both haves and have-nots access to education.

As social media connects people together, OERs and MOOCs keep educators and learners updated. Students get access to the most significant materials and expertise from worldwide experts and researchers throughout the world (Ossiannilsson, 2019).

MOOCs and OERs play a pivotal role in supporting libraries in delivering services that are aligned with a range of SDGs, including SDG 4 (Quality Education), SDG 5 (Gender Equality), SDG 8 (Decent Work and Economic Growth), SDG 9 (Industry, Innovation, and Infrastructure), SDG 10 (Reduced Inequalities), SDG 11 (Sustainable Cities and Communities), and SDG 16 (Peace, Justice, and Strong Institutions). Incorporating MOOCs and OERs into library services enhances their ability to address these critical SDGs, promoting access to education, equity, economic development, and community resilience, while also fostering informed and engaged citizens.

Open Access Institutional Repositories

Open Access (OA) publications are defined as those that are freely and universally accessible online without any access restrictions (Suber, 2004 in Ferreras-Fernández, 2016). By creating and maintaining Institutional Repositories (IRs) that disseminate academic content in the form of theses and dissertations, conference proceedings, university publications, historical documents, research data, and faculty articles, academic libraries are currently supporting Green Open Access. University KRCs take these steps to increase the accessibility of research findings, for the benefit of the research community and the general public (Ferreras-Fernández, 2016). The ways that institutions are attempting to promote OA are varied. Such mandates will be effective only if the universities offer the institutional repository ?? infrastructure for uploading papers (Björk, 2017). After five years, works published on Academia.edu, a platform for sharing academic research, received 58% more citations than articles published on other websites, such as individual and departmental home pages (Niyazov, 2016).

Open-access institutional repositories can significantly contribute to several SDGs by enabling free and unrestricted access to academic research and information. Jain (2021) has mentioned that the majority of the SDGs, which depend on greater access to

information and knowledge, might be supported by open-access publications. Open access and information access are clearly related, hence open access and sustainable development. International organisations such as World Intellectual Property Organization (WIPO) and UNESCO have amended their internal rules to formally acknowledge open access as a catalyst for accomplishing the SDGs and sustainable social, political, and economic development.

Examples of Organisations

University KRCs play a pivotal role in contributing to the achievement of the UN SDGs by providing access to educational resources, fostering community development, and embracing inclusive approaches that benefit society as a whole. India has been actively working towards fulfilling the SDGs and has implemented various initiatives and programmes to address these global objectives. Several case studies highlight the instrumental role of university KRCs in SDG implementation:

Digital Empowerment Foundation (DEF)

DEF is a non-profit organisation headquartered in Delhi that focuses on leveraging digital tools and digital literacy to empower individuals to access improved healthcare, education, skills, and livelihood opportunities. Their efforts align with SDG 4 (Quality Education) and SDG 9 (Industry, Innovation, and Infrastructure). DEF has established Community Information Resource Centers (CIRCs) in villages across India, serving as digital hubs equipped with computers and internet access. By facilitating access to educational resources, online programs, and government initiatives, DEF's CIRCs have enhanced educational prospects and equipped people with the tools needed to participate fully in the digital economy (source: Defindia.org/community-informatio n-resource-centres-circs).

National Digital Library of India (NDLI)

NDLI is a National Mission on Education through Information and Communication Technology (NMEICT) project developed by the Indian Institute of Technology, Kharagpur, with support from the Ministry of Human Resource Development (MHRD), Government of India. NDLI aims to digitally preserve and provide access to a vast repository of books and other learning resources, aligning with SDGs 4 (Quality Education) and 9 (Industry, Innovation, and Infrastructure). It serves as a comprehensive platform for e-learning, sharing educational resources contributed by India's existing digital archives and educational institutions (source: Ndl.iitkgp.ac.in).

Ahmedabad Community Foundation Library: Located in Ahmedabad, Gujarat, this library actively supports SDG 4 (Quality Education) by providing access to resources and technology for educational purposes and skill development (source: www.acfindia.org/internal-changes.html).

These examples vividly demonstrate how libraries in India play a pivotal role in advancing the SDGs. By leveraging their infrastructure, resources, and community engagement, libraries empower individuals, reduce inequality, and promote sustainable development at the local level.

RQ3 How does the Central Library of Jawaharlal Nehru University support SDGs?

Supporting SDGs@JNU Central Library, India: A glimpse

Central Library, Jawaharlal Nehru University, India, has adopted several measures to achieve SDGs in various ways, as evident through Table 1.

Remote Access Services

Remote Access Services (RAS) in libraries can contribute highly to achieving the SDGs. Central Library, JNU is offering services to users off the -campus through remote access services as depicted in Figure 1. The users can access the e-resources of the library 24/*7, anytime, anywhere. The library frequently organises seminars or workshops for the researchers to enrich their digital skills in navigating the resources of the libraries. Ezproxy is deployed to offer scholars a remote access service to access the library's e-resources.

Digitisation of theses and dissertations

Unlike white literature (books or journals), grey material has distinct qualities that frequently make it difficult to disseminate and make available since it cannot be obtained through commercial channels of scholarly communication (Gul *et al.*,

2021). The research produced needs to be disseminated to the academic community to avoid duplication and to build further research.

Central Library, JNU has digitised 20,000 theses to make the content available to the researchers. The accessibility of the e-theses is not restricted to the physical boundaries of the premises and can be accessed through remote access. The quality of the theses and dissertations are scrutinised using anti-plagiarism software as per University Grants Commission (UGC) Regulations 2018.

Shodhganga Repository

INFLIBNET is one of the leading Library Network Centres in the nation, advocating for open access nationwide through various projects. The Centre developed a central server to gather metadata from other (Electronic Theses and Dissertations (ETD) repositories distributed by member universities to provide unified access to theses and dissertations. It uses the Open Archives Initiative Protocol for Metadata Harvesting (OAI-PMH) compliant software DSpace at the backend of the Shodhganga ETD repository (Panda, 2016). Central Library contributes to the repository to access the theses and dissertations submitted to the university.

E-Thesis Tracking System

Central Library has a system where scholars submit their theses and dissertations online as shown in Figure 2. The files are submitted by them and can be downloaded by the library. Further, the record is directed to the evaluation branch for the necessary action of sending them for evaluation for award of degree. The



Figure 1: Remote Access in JNU.

Table 1: Services in the JNU Central Library.

SI. No.	KRC Services	Related SDGs
1	Information resources-books, journals, theses and dissertations, e-books, online databases.	SDG 4,9,10
2	Online Public Access Catalogue (OPAC), single window search.	SDG 4,9,10
3	Workshops on use of various resources tools; different components of a 2-credit course on RPE introduced by UGC in 2019. Information literacy.	SDG 4,9,10
4	Physical Spaces (study spaces, host events like workshops, meetings, lectures, book discussions; such programmes, facilities are essential for lifelong learning, skill development and align with SD4. They build a sense of community and understanding by providing a space for discussions and events irrespective of caste, colour, creed, gender, or ideology (SDG16). They also share their spaces with other university departments to organise events. The students and researchers from different domains sit together and interact, which may trigger an idea to collaborate in academic and research endeavours or for addressing common problems (SDG17).	SDG 4,16,17
5	Assistive technologies for visually challenged students.	SDG 4, SDG 10
6	Single-Sign Facility for users to access online resources from remote locations.	SDG 4, SDG 10
7	Library professional on the Internal Complaints Committee addresses and resolves cases of sexual harassment, according to POSH Act 2013. The Member speaks on creating a gender sensitive campus where everyone is free to achieve their full potential and advocates for creating a safe and inclusive environment by promoting gender equality, respect and sensitivity towards all genders.	SDG 5,10
8	Digitisation of theses and dissertations; Shodhganga repository; Institutional repository for visually challenged users.	SDG 4, SDG 9,10
9	Cyber library with 144 terminals to access OPAC and online resources.	SDG 4, SDG 9,10
10	Talking lifts, Accessible toilets, wheelchairs for students with disabilities, laptops and digital voice recorders.	SDG 10

workflow is online for smooth functioning, and the status of the submitted file can be tracked by the scholars.

Assistive Technologies

JNU Central Library provides services to the University's Visually Impaired (VI) students and researchers by utilising innovative assistive technologies as shown in Figure 3. It offers facilities such as ramps, wheelchairs, and talking lifts for disabled users. The Helen Keller unit offers specialised services to VI users and is equipped with leading-edge technologies to facilitate the users. The staffs with specialised skills are deputed to handle the users' queries.

The library scans printed materials for visually disabled users and makes them available in an accessible format to meet their demands. An institutional repository, titled "Divyang Digital Pustakalaya" (http://10.107.19.215:8080/xmlui/) is developed to deposit scanned documents for easy access anytime on intranet as is evident through Figure 4. The Central Library regularly hosts training sessions and seminars to inform researchers how to use the most recent assistive technologies.

In-house training programmes are organised by the library for the staff to enhance their digital literacy skills. It will enable the staff to handle the users' queries effectively and efficiently. UGC Regulations (2018) mentioned using anti-plagiarism software in academics to check scholarly work. In this connection, Central Library has access to anti-plagiarism software to evaluate the scholarly content of the scholars.

Central Library is a member of Sugamya Pustakalaya, a collaborative initiative involving TCS, Daisy Forum of India, and the National Institute for Empowerment of Persons with Visual Disabilities (NIEPVD), Government of India. Its primary objective is to eliminate the book scarcity faced by individuals with print disabilities. Through this platform, users gain access to a wide range of books in diverse languages sourced from various libraries across India. Additionally, Sugamya Pustakalaya has forged partnerships with international organisations such as Book share and the Accessible Books Consortium, enhancing the collection with accessible books from around the globe. Users can explore over 653,234 books, manage their reading selections online, and download books in preferred formats. Sugamya Pustakalaya is a facilitating platform for producers of accessible content, fostering collaborative efforts to create and provide accessible books for individuals with print disabilities.

DISCUSSION

The survey findings of 49 Central Universities (Annexure A) revealed that most university KRCs had e-resources to facilitate the user community. Students, faculty, and researchers can access materials anytime, anywhere, using computers or mobile devices. Integrated Library Management Software (ILMS) allows

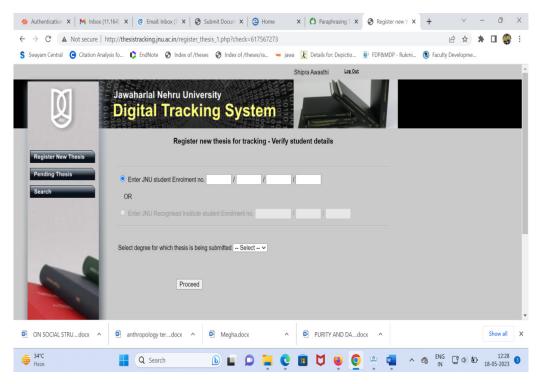


Figure 2: E-Thesis Tracking System in JNU.



Figure 3: Helen Keller Unit in JNU: A Specialised Unit for Visually Disabled Users.

the integration of resources and unrestricted access to library resources. OPACs are in place in all the libraries, allowing users to search and locate the resources for their availability. University KRCs subscribe to a wide range of online resources, including e-journals, e-books, and other multimedia content.

Users can request materials through interlibrary loan services that are not in their library but can be borrowed from other libraries. These services make it easier to access resources outside of the local collection. Open-access projects, which seek to make scholarly articles freely accessible online, are encouraged by many universities. This movement fosters information sharing and broadens access to research outcomes. University KRCs

frequently play a vital role in administering IR, supporting open-access publication, and helping authors meet funding agency criteria. University KRCs are providing remote access facilities to the academic community to access online resources anytime, anywhere. This enables the authorised user to connect to the library portal and access the subscribed content.

Recommendations for University KRCs and Stakeholders

To effectively utilise the services in university KRCs and align them with SDGs, a few recommendations based on the literature reviewed for libraries are as follows:

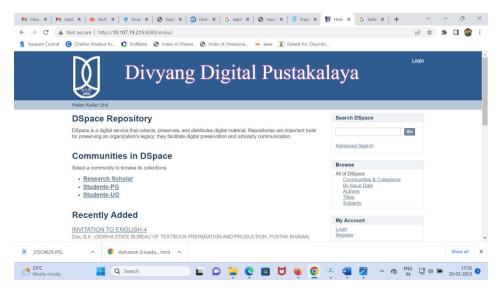


Figure 4: Institutional Repository for Visually Challenged Users in JNU.

- University KRCs should provide robust digital infrastructure for seamless remote access to e-resources,
- University KRCs need to widen their digital collection to cater to users' needs, including educational materials, e-books, databases, and multimedia content,
- User-friendly platforms need to be designed for easy navigation and search functionality by the users,
- Digital literacy programmes need to be organised for the users to enhance their learning by utilising remote access services effectively,
- University KRCs and stakeholders should establish mechanisms to monitor and evaluate the impact of services in achieving SDGs,
- Assistive technologies may be deployed to facilitate differently-abled learners or students in their academic research endeavors.

The recommendations are applicable and beneficial for libraries in other countries. These universal recommendations align with the broader goals of providing inclusive, accessible, and impactful library services. However, implementing these recommendations may require adjustments to suit each country's local context and specific needs.

Future directions and research opportunities

This paper serves as a general framework and can be expanded upon with specific case studies, data, and examples to support further the discussion on how libraries contribute to the SDGs. Future research can focus on conducting comprehensive impact assessments to evaluate the effectiveness and outcomes of the services in university libraries, investigate user experiences, information-seeking behavior, and preferences in accessing and utilising library resources, and can explore the challenges faced by

the scholars in accessing and using these services, such as limited internet connectivity, lack of digital skills, and affordability issues.

Libraries should track and measure the impact of their SDGs-related initiatives on research and education.

CONCLUSION

University KRCs in India are vital actors in achieving the SDGs. They contribute to various aspects of sustainable development by providing information, education, community engagement, and technology access, empowering individuals and communities to harness their potential and thrive. They can contribute to these SDGs by ensuring access to information, promoting education and lifelong learning, fostering digital inclusion, and supporting the development of strong institutions and partnerships by providing library services.

University KRCs are vital for community support, individual empowerment, and the development of a more diverse and sustainable society. Through advancing partnerships, education, gender equality, economic growth, sustainable communities, and climate action, they play a crucial role in realising the SDGs. They are potent change agents because of their functions as community centres and information hubs, which enable people and groups to contribute to a sustainable and inclusive future.

NOTES

Articles 341 and 342 of the Constitution of India define who would be Scheduled Castes and Scheduled Tribes with respect to any State· or Union Territory. The relevant Constitutional articles are quoted below:

The President, concerning any State or Union Territory, and
if it is a State, following consultation with its Governor, has
the authority to declare, through public notification, the
castes, races, tribes, or specific segments within them that

- will be considered as Scheduled Castes for the purposes outlined in this Constitution, in connection to that specific State or Union Territory,
- The President, concerning any State or Union Territory, and when applicable to a State, following consultation with its Governor, can, through public notification, designate the tribes, tribal communities, or specific segments within them that shall be recognised as Scheduled Tribes for the purposes outlined in this Constitution, in connection to that particular State or Union Territory,
- Introductory: Definition of SC and ST. Source: Documents. doptcirculars.nic.in/D2/D02adm/Introductory.pdf,
- Economically Weaker Section (EWS) in India is a subcategory of people with an annual family income of less than ₹8 lakh (US\$10,000).1 million=10 lakhs.

CONFLICT OF INTEREST

The authors declare that there is no conflict of interest.

REFERENCES

- Abiolu, O. A., & Okere, O. O. (2012). Environmental literacy and the emerging roles of information professionals in developing economies. IFLA Journal, 38(1), 53–59. DOI: 10.1177/0340035211435070
- Asif, M., & Singh, K. K. (2022). Libraries @ national education policy (NEP 2020) in India. IP Indian Journal of Library Science and Information Technology, 7(1), 18–21. DOI: 10.18231/j.ijlsit.2022.004
- Atta-Obeng, L., & Dadzie, P. S. (2020). Promoting sustainable development goal 4: The role of academic libraries in Ghana. International Information and Library Review, 52(3), 177–192. DOI: 10.1080/10572317.2019.1675445
- Bangani, S. (2024). Academic libraries' support for quality education through community engagement. Information Development, 40(4), 590–601. DOI: 10.1177/02666669231152862
- Bangani, S., & Dube, L. (2024). Academic libraries and the actualisation of Sustainable Development Goals two, three and thirteen. Journal of Librarianship and Information Science, 56(3), 773–784. DOI: 10.1177/09610006231174650
- Björk, B.-C. (2017). Open access to scientific articles: A review of benefits and challenges. Internal and Emergency Medicine, 12(2), 247–253. DOI: 10.1007/s11739-017-1603-2
- Chakrabarty, S. P., & Kaur, R. (2021). A primer to traditional knowledge protection in India: The road ahead. The Liverpool Law Review, 42(3), 401–427. DOI: 10.1007/s10991-021-09281-4
- Chokshi, R. (2022). A study on readiness of the teachers of the Maharaja Sayajirao University of Baroda, Vadodara, regarding usage and development of E Content Doctoral dissertation. Maharaja Sayajirao University of Baroda.
- Cholin, H. V., & Naik, U. (2022). ICT professional skills and NEP2020: A special reference to library and information science education in Karnataka State. In Proceedings of the 13th International CALIBER-2022. BHU.
- Chuenchom, S., Wimonsittichai, N., Chaimin, C., Ammarukleart, S., Timakum, T., Putthima, S., & Wipawin, N. (2022). Libraries for Sustainable development Goals (SDGs) TLA Bulletin. 66(2). 1–27.
- David, M. P. C. (2018). Sustainable development goals (SDGs)-challenges for India. Indian Journal of Public Health Research and Development, 9(3). DOI: 10.5958/0976-5506.2018.00172.9
- Ferreras-Fernández, T., García-Peñalvo, F., Merlo-Vega, J. A., & Martín-Rodero, H. (2016). Providing open access to PhD theses: Visibility and citation benefits. Program, 50(4), 399–416. DOI: 10.1108/PROG-04-2016-0039
- Gbaje, E. S. (2007). Provision of online information services in Nigerian academic libraries. Nigerian Libraries, 40.
- Gorai, J. (2021). Transforming India: Professional development for teacher INICT. Wesleyan Journal of Research, 14(01), 491–499.
- National Educational Technology Forum (NETF). https://education.gov.in/sites/upload_files/mhrd/files/upload_document/NETF.pdf
- Gul, S., Shah, T. A., Ahmad, S., Gulzar, F., & Shabir, T. (2021). Is grey literature really grey or a hidden glory to showcase the sleeping beauty. Collection and Curation, 40(3), 100–111. DOI: 10.1108/CC-10-2019-0036

- Han, Y., Vachuska, T., Al-Shabibi, A., Li, J., Huang, H., Snow, W., & Hong, J. W.-K. (2018). ONVisor: Towards a scalable and flexible SDN-based network virtualisation platform on ONOS. International Journal of Network Management, 28(2), Article e2012. DOI: 10.1002/nem.2012
- India, National Education Alliance for Technology (NEAT). https://neat.aicte-india.org/aboutNeat.
- International Federation of Library Associations and Institutions. Libraries and the Sustainable Development Goals a storytelling manual. http://www.ifla.org/wp-content/uploads/2019/05/assets/hq/topics/libraries-development/documents/sdg-storytelling-manual.pdf
- International Federation of Library Associations and Institutions. Powering sustainable development. http://www.ifla.org/showing-libraries-contribution-to-development/
- Jain, P. (2021). Open access as a platform for sustainable development: Prospects and challenges in Africa. In P. Jain, N. Mnjama, & O. Oladokun (Eds.), Open access implications for sustainable social, political, and economic development (pp. 1–23). IGI Global. DOI: 10.4018/978-1-7998-5018-2.ch001
- Jha, S. S., & Kampa, R. K. (2022). NEP-2020: OER and M-learning in higher education. In Proceedings of the 13th International CALIBER-2022. BHU.
- Joshi, M. K., & Wadhwa, V. (2022). Status of Indian Research Data Repositories: A Study based on Research Data Registry. In Proceedings of the 13th International CALIBER-2022. BHU.
- Kanamadi, S., & Kumbar, B. D. (2006). Web-based services expected from libraries: A case study of management institutes in Mumbai city. Webology, 3(2).
- Kanwar, A., Kodhandaraman, B., & Umar, A. (2010). Toward sustainable open education resources: A perspective from the global south. American Journal of Distance Education, 24(2), 65–80. DOI: 10.1080/08923641003696588
- Kaurav, R. P. S., Narula, S., Baber, R., & Tiwari, P. (2021). Theoretical extension of the new education Policy 2020 using twitter mining. Journal of Content, Community and Communication, 13(1), 16–26.
- Kumar, A. (2021). New education policy (NEP) 2020. In W. B. James, C. Cobanoglu, & M. Cavusoglu (Eds.), Advances in global education and research, 4: A roadmap for India 2.0 (pp. 1–8). USF M3 Publishing. DOI: 10.5038/9781955833042
- Kurbanoğlu, S., & Boustany, J. (2014). From green libraries to green information literacy. In Communications in Computer and Information Science S. Kurbanoğlu, S. Spiranec, E. Grassian, D. Mizrachi, & R. Catts (Eds.)Information Literacy. Lifelong Learning and Digital Citizenship in the 21st Century. ECIL 2014. Springer, 492. DOI: 10.1007/978-3-319-14136-7. 6
- Lo, P., & Stark, A. (2021). Examining the relationship between social inclusion and mobile libraries in the age of Internet connectivity: A qualitative study of mobile librarians around the globe. Journal of Librarianship and Information Science, 53(2), 245–270. DOI: 10.1177/0961000620935476
- Mahmood, K., Ahmad, S., Ur Rehman, S., & Ashiq, M. (2021). Evaluating library service quality of college libraries: The perspective of a developing country. Sustainability, 13(5), 2989. DOI: 10.3390/su13052989
- Mani, M., Thirumagal, A., & Vanitha, A. (2017). E-bast A:A new digital India initiative. In A. P. Shanmugam (Ed.), Digital library and web technology. Thiruvalluvar University, 32-26.
- Mansour, E. (2020). Libraries as agents for development: The potential role of Egyptian rural public libraries towards the attainment of Sustainable Development Goals based on the UN 2030 Agenda. Journal of Librarianship and Information Science, 52(1), 121–136. DOI: 10.1177/0961000619872064
- Marcella, R., & Chowdhury, G. (2020). Eradicating information poverty: An agenda for research. Journal of Librarianship and Information Science, 52(2), 366–381. DOI: 10.1177/0961000618804589
- Mia, S. M. (2020). The role of community libraries in the alleviation of information poverty for sustainable development. International Journal of Library and Information Science, 12(2), 31–38. DOI: 10.5897/JJLIS2020.0942
- Nehra, S. S., & Bansode, D. S. (2023). India's open data initiatives: A way to knowledge discovery, transformation and to achieve sustainable development goals (SDGs) 2030. DESIDOC Journal of Library and Information Technology, 43(1), 21–29. DOI: 10.14429/djlit.43.01.18622
- Nhamo, G., & Malan, M. (2021). Role of libraries in promoting the SDGs: A Focus on the University of South Africa. In G. Nhamo, M. Togo, K. Dube (Eds.), Sustainable Development Goals for Society vol. 1: Selected topics of global relevance (pp. 137–153). Springer International Publishing. DOI: 10.1007/978-3-030-70948-8 _10
- Niyazov, Y., Vogel, C., Price, R., Lund, B., Judd, D., Akil, A., Mortonson, M., Schwartzman, J., & Shron, M. (2016). Open access meets discoverability: Citations to articles posted to Academia.edu. PLOS One, 11(2), Article e0148257. DOI: 10.1371/journal. pone.0148257
- Nyantakyi-Baah, L., Lyaka, M., Kiwelu, J. E., & Holmner, M. (2020). Achieving sustainable development goals two and three: Role of academic libraries. Library Philosophy and Practice, 3995. https://digitalcommons.unl.edu/libphilprac/3995.
- Ossiannilsson, E. (2019). OER and OEP for access, equity, equality, quality, inclusiveness, and empowering lifelong learning. International Journal of Open Educational Resources, 1(2), 131–154. DOI: 10.18278/ijoer.1.2.9
- Panda, S. K. (2016). Shodhganga-A national level open access ETD repository of Indian electronic theses: Current status and discussions. Library Hi Tech News, 33(1), 23–26. DOI: 10.1108/LHTN-09-2015-0062

- Popoola, B. O. (2019). Involving libraries in improving health literacy to achieve sustainable development Goal-3 in developing economies: A literature review. Health Information and Libraries Journal, 36(2), 111–120. DOI: 10.1111/hir.12255
- Santos-Hermosa, G. (2018). The role of academic libraries in MOOCs. The envisioning report for empowering universities (pp. 48–51). EADTU.
- Sivankalai, S. (2021). Academic Libraries support e-learning and Lifelong Learning: A case study. Library Philosophy and Practice, 8(18), 1–18.
- Sosa-Díaz, M. J., & Fernández-Sánchez, M. R. (2020). Massive Open Online Courses (MOOC) within the framework of international developmental cooperation as a strategy to
- achieve sustainable development goals. Sustainability, 12(23), Article 10187. DOI: 10.3390/su122310187
- V. D. Bapte. (2022). Libraries in the context of National Education Policy. Annals of Library and Information Studies, 69(3), 221–224. DOI: 10.56042/alis.v69i3.63666
- Wallace, J. (2019). Government documents. In Introduction to library research in anthropology (pp. 191–195). Routledge. DOI: 10.4324/9780429044069-17
- Wilmot, W., & Hocker, J. L. (2017). Interpersonal conflict (p. 384). McGraw-Hill Education.

Cite this article: Awasthi S, Das AK, Tripathi M. Role of University Knowledge Resource Centres in Achieving Sustainable Development Goals (SDGs): A Case of India. Journal of Data Science, Informetrics, and Citation Studies. 2025;4(2):143-58.

Annexure A: KRCs in the Central Universities in India.

SI. No.	Name of University	Location	URL of the KRC
1.	Aligarh Muslim University	Aligarh (U.P.)	https://amu.ac.in/libraries/maulana-azad-library
2.	Assam University	Silchar (Assam)	https://ausopac.informaticsglobal.com/
3.	Babasaheb Bhimrao University	Lucknow (U.P.)	www.gbl.bbau.ac.in/
4.	Banaras Hindu University	Varanasi (U.P.)	www.bhu.ac.in/Site/ UnitHomeTemplate/1_3240_4531_Main-Site-Central-Library
5.	Central Agricultural University	Imphal (Manipur)	https://cau.ac.in/library-coa-imphal/
6.	Central University of Gujarat	Gandhinagar (Gujarat)	http://opac.cug.ac.in/
7.	Central University of Haryana	Mahendragarh (Haryana)	https://library.cuh.ac.in/
8.	Central University of Himachal Pradesh	Dharamshala (Himachal Pradesh)	www.cuhimachal.ac.in/index.php/Facilities/library
9.	Central University of Jammu	Jammu (Jammu and Kashmir)	https://cujammu.ac.in/Default.aspx?option=articleandtype=singleandid=35andmnuid=738
10.	Central University of Jharkhand	Ranchi (Jharkhand)	http://cuj.cuj.ac.in/library-cuj.php
11.	Central University of Karnataka	Gulbarga (Karnataka)	http://cuklibrary.ac.in/
12.	Central University of Kashmir	Srinagar (Jammu and Kashmir)	www.cukashmir.ac.in/Facilities-Student/Library.aspx
13.	Central University of Kerala	Kasaragod (Kerala)	https://library.cukerala.ac.in/
14.	Central University of Orissa	Koraput (Odisha)	https://cuo.ac.in/Facilities_Library.asp?pgid=6andsubid=1
15.	Central University of Punjab	Bathinda (Punjab)	https://cup.edu.in/library.php
16.	Central University of Rajasthan	Ajmer (Rajasthan)	www.curaj.ac.in/library

No.	
Nadu Or. Hari Singh Gour University Sagar (Madhya Pradesh) Dr. Rajendra Prasad Central Agricultural University English and Foreign Languages University Chantisgarh) Www.dhsgsu.edu.in/index.php/en/admission/central www.rpcau.ac.in/university-library/ www.rpcau.ac.in/university-library/ www.efluniversity.ac.in/ramesh_library.php www.ggu.ac.in/ Www.ggu.ac.in/ Www.ggu.ac.in/ www.hnbgu.ac.in/library-srinagar-campus Indian Maritime University Chennai (Tamil Nadu) New Delhi http://www.ignou.ac.in/ignou/aboutignou/division/introduction	
(Madhya Pradesh) 20. Dr Rajendra Prasad Central Agricultural University 21. English and Foreign Languages University 22. Guru Ghasidas Vishwavidyalaya 23. Hemwati Nandan Bahuguna Garhwal University 24. Indian Maritime University 25. Indira Gandhi National Open University (Madhya Pradesh) Bihar, (Pusa, Samastipur) Hyderabad (Telangana) Www.efluniversity.ac.in/ramesh_library.php Www.ggu.ac.in/ (Chattisgarh) www.ggu.ac.in/ (Chattisgarh) Www.hnbgu.ac.in/library-srinagar-campus (Uttarakhand) http://imuchennai.informaticsglobal.com/ (Tamil Nadu) http://www.ignou.ac.in/ignou/aboutignou/division/ introduction	
Agricultural University Samastipur) 21. English and Foreign Languages University Cleangana) Hyderabad (Telangana) Www.efluniversity.ac.in/ramesh_library.php Www.ggu.ac.in/ Www.ggu.ac.in/ Www.hnbgu.ac.in/library-srinagar-campus Garhwal University Chennai (Tamil Nadu) Chennai (Tamil Nadu) Lindira Gandhi National Open University New Delhi Chennai http://www.ignou.ac.in/ignou/aboutignou/division/introduction	ıl-library
University (Telangana) 22. Guru Ghasidas Vishwavidyalaya Bilaspur (Chattisgarh) 23. Hemwati Nandan Bahuguna Garhwal University (Uttarakhand) 24. Indian Maritime University Chennai (Tamil Nadu) 25. Indira Gandhi National Open University New Delhi http://www.ignou.ac.in/ignou/aboutignou/division/introduction	
(Chattisgarh) 23. Hemwati Nandan Bahuguna Garhwal University 24. Indian Maritime University Chennai (Tamil Nadu) 25. Indira Gandhi National Open University (Chattisgarh) Www.hnbgu.ac.in/library-srinagar-campus (http://imuchennai.informaticsglobal.com/ (Tamil Nadu) http://www.ignou.ac.in/ignou/aboutignou/division/ introduction	
Garhwal University (Uttarakhand) 24. Indian Maritime University Chennai (Tamil Nadu) 25. Indira Gandhi National Open University New Delhi http://www.ignou.ac.in/ignou/aboutignou/division/introduction	
(Tamil Nadu) 25. Indira Gandhi National Open University (Tamil Nadu) New Delhi http://www.ignou.ac.in/ignou/aboutignou/division/introduction	
University introduction	
26. Indira Gandhi National Tribal Amarkantak www.igntu.ac.in/clib.aspx	'ldd/
University (Madhya Pradesh)	
27. Jamia Millia Islamia New Delhi https://jmi.ac.in/ACADEMICS/University-Library	
28. Jawaharlal Nehru University New Delhi http://lib.jnu.ac.in/	
29. Mahatma Antarrashtriya Hindi Vishwavidyalaya Wardha (Maharashtra) https://hindivishwa.org/contentdtl.aspx?category=1	3andcgid=34
30. Mahatma Gandhi Central Motihari (Bihar) https://mgcub.ac.in/library.php University	
31. Manipur University Imphal (Manipur) http://mulibrary.manipuruniv.ac.in/	
32. Maulana Azad Urdu National Hyderabad https://manuu.edu.in/dde/central-library (Telangana)	
33. Mizoram University Aizawl (Mizoram) https://lib.mzu.edu.in/	
34. Nagaland University Lumami (Nagaland) https://library.nagalanduniversity.ac.in/	
35. Nalanda University Rajgir, Nalanda https://nalandauniv.edu.in/library/ (Bihar)	
36. National Sports University Imphal (Manipur) www.nsu.ac.in/library	
37. North Eastern Hill University Shillong www.nehu.ac.in/library/ (Meghalaya)	
38. Pondicherry University Puducherry (Pondicherry) https://lib.pondiuni.edu.in/	
39. Rajiv Gandhi National Aviation Raebareilly (U.P.) www.rgnau.ac.in/en/node/142 University	
40. Rajiv Gandhi University Itanagar http://www.rguhs.ac.in/digitallibrary/RGUHS%20D	Digital%20
41. Rani Lakshmi Bai Agricultural Jhansi (U.P.) http://122.185.27.76/ University	
42. Sikkim University Gangtok (Sikkim) https://library.cus.ac.in/	
43. South Asian University New Delhi https://sau.int/non-teaching-staff/library/	

SI. No.	Name of University	Location	URL of the KRC
44.	Tezpur University	Tezpur (Assam)	www.tezu.ernet.in/Library/
45.	Tripura University	Agartala (Tripura)	http://opac.tripurauniv.ac.in/
46.	University of Allahabad	Allahabad (U.P.)	www.allduniv.ac.in/facilities/services2
47.	University of Delhi	New Delhi	https://crl.du.ac.in/
48.	University of Hyderabad	Hyderabad (Telangana)	http://igmlnet.uohyd.ac.in:8000/
49.	Visva Bharati University	Santiniketan	http://visva-bharati-library.in/
		(West Bengal)	