



Designing an Online Resource-Sharing Network Model for Sri Karan Narendra Agriculture University Libraries, Rajasthan

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ABSTRACT

Sri Karan Narendra Agriculture University (SKNAU) library in Jobner are very essential for agricultural universities in Rajasthan. These libraries are very important for research, education, and extension in agriculture, but they often don't have enough money because they all get money from the same central source and not enough from the local region. Because of this, it's important for everyone to be able to get to good scholarly information, tools, and technology. To do this, people need to work together and have a single way to share resources. In Rajasthan, there are a number of colleges that work together at Sri Karan Narendra Agriculture University (SKNAU). These include SKN College of Agriculture, SKN College of Agri-Business Management, and College of Dairy Science and Technology (Jobner). These libraries work together to help Most SKNAU libraries are using KOHA (cloud-hosted LMS) and participate in CeRA (Consortium for e-Resources in Agriculture) and Krishikosh (e-thesis and publication repository), laying a strong foundation for future digital collaboration. This paper deals the design and development of Sri Karan Narendra Agricultural University Libraries Information System (SKNAULIS) as an online network model based on ring like system of resource sharing would be appropriate for improving research and planning, reducing duplication in research efforts, encouraging dissemination of research findings and, sustainable agricultural development in Rajasthan. For effective resource sharing, the first requirement is transparency and cataloging of all existing resources—books, journals, conference proceedings, theses, reports, micro-documents, and digital collections. Only when such resources are documented, accessible, and known across all libraries, can a mutual sharing model be implemented. This proposed study seeks to design a practical, scalable model for digital resource sharing across SKNAU libraries that can also serve as a pilot for broader implementation across Rajasthan or even nationally.

Keywords: Digital Library Network, KOHA, SKNAU, Library Consortium, Resource Sharing

1. Introduction

The notion of resource sharing is not novel.

Allen Kent says that the word has two crucial parts: "resource," which means anything that

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might help in a time of need, and "sharing," which means giving what you have for the good of others. This idea applies to both the theoretical and practice libraries at Sri Karan Narendra Agriculture University (SKNAU) in Jobner. The greatest way to share resources is for each partner to provide something helpful and be able to acquire resources from other partners when they need them. Digital India and projects like Viksit Bharat Abhiyan are not just about connecting people digitally; they are also about making sure everyone has equal access to technology. This means that even schools and businesses in rural areas and on farms should have access to good digital resources and information infrastructure. Farming is the main source of income for most Indians, thus to develop "Viksit Bharat," we need to work together and share network resources to strengthen agricultural knowledge systems. Some recent tools and ideas that already provide a technological framework are Open Networking Operating Systems (ONOS), cloud-based library systems like KOHA, and digital repositories like Krishikosh. But for all SKNAU libraries to fulfill their full potential, they need to be connected by a digital library network that fosters inter-library loans, makes it easier to access e-resources from one place, and allows users send knowledge online. The Indian Council of Agricultural Research (ICAR) realized how crucial it was to work together to develop libraries as early as 1978. Its Review Committee on Agricultural Universities stated: "No library can ever hope to buy every book it needs. Libraries should develop their collections in cooperation and coordination. A coordinated procurement strategy with subject specialization and minimal duplication is required."

The committee also recommended:

- A nationwide agricultural library network (AGLINET) for shared resources
- Standardization of cataloging practices and

documentation

- Use of electronic document reproduction and computerized, satellite-based information systems
- On-line terminal access for scientists at ICAR and State Agricultural Universities (SAUs)

This vision remains even more relevant today, as we move toward AI-powered research, open-access repositories, and global academic connectivity.

2. Objectives of the Study

The current study seeks to accomplish the following objectives:

- To look into the current state of library resources and services in the libraries of Sri Karan Narendra Agriculture University (SKNAU). To determine the necessity and extent of resource sharing among the constituent college libraries of SKNAU
- To provide a model for an online resource-sharing network that is both efficient and scalable (SKNAULIS).
- To encourage the best use of library resources by using cooperative acquisition and interlibrary lending programs.
- To propose methods for enhancing digital collaboration through established platforms like KOHA, CeRA, and Krishikosh.

3. Methodology: The research employs a descriptive and analytical design. We used both primary and secondary data sources.

Data Collection:

- Primary data collected through informal discussions with library professionals and observation of SKNAU library systems.
- Secondary data collected from books, journals, conference proceedings, official reports of ICAR, and relevant online sources.

Scope of Study:

- The study is limited to the libraries of Sri Karan Narendra Agriculture University (SKNAU), Jobner, and its constituent colleges in Rajasthan.

Method of Analysis:

- Comparative analysis of existing library infrastructure and services.
- Evaluation of resource-sharing practices and technological readiness.
- Conceptual modeling approach for designing the proposed SKNAULIS network.

Tools and Techniques:

- Review of literature
- Analytical interpretation
- Model-based design (Ring Topology approach)

4. Relevance to SKNAU and Rajasthan's Agricultural Education Ecosystem

Sri Karan Narendra Agriculture University (SKNAU), with multiple constituent colleges across Rajasthan, is uniquely positioned to lead a state-wide digital library consortium. The existing use of KOHA (cloud-based LMS), access to CeRA, and contributions to Krishikosh indicate a strong base for building a fully operational, digital, and collaborative library network. Through this network, SKNAU libraries can:

- Optimize use of their budgets through coordinated subscriptions and acquisitions
- Avoid duplication and ensure subject specialization
- Improve research support and academic service delivery
- Align with Digital India's vision of inclusive digital infrastructure

- Act as a model for Viksit Bharat Abhiyan by making agricultural knowledge more accessible, interconnected, and impactful

5. Factors Influencing Resource Sharing in SKNAU Libraries, Rajasthan

The sharing of resources among agricultural university libraries is feasible only when participating institutions are aware of each other's resources and are willing to operate under a shared policy of cooperation. The first step to sharing resources effectively is to make sure that all of them—books, journals, conference proceedings, theses, reports, micro-documents, and digital collections—are clear and organized. A mutual sharing approach can only work if all libraries have access to and know about these resources.

6. Classification of SKNAU Libraries by the Size of Their Collections:

Based on early data, SKNAU's libraries can be split into two main groups:

6.1 Central Library (Jobner): Has the most items (more than 50,000).

6.2 Constituent College Libraries (like those in Fatehpur, Lalsot, Bharatpur, Jhalawar, and so on) usually have fewer books (less than 50,000). The Central Library has a lot of general and specialist materials, but college libraries usually have collections that focus on certain subjects, such as horticulture, plant protection, agri-business, or soil science. This makes it possible to: Interlibrary loan systems, Sharing photocopies (reprographics), Specialized collection transfers or digital access between institutions based on the subject area. For example, if one college library focuses on seed

technology and another on agronomy, allowing students from both campuses to access those materials would help them do better in school.

7. Technical Information Service: Sharing technical services in libraries, such as:

- Cataloguing
- Classification
- Indexing
- Bibliography
- Document Delivery Service

Although KOHA is already in using by some Constituent colleges of Sknau but with the establishment of standard cataloging codes and classification schemes (e.g., DDC, AACR2 or RDA), SKNAU libraries can:

- Search and Avoid Duplication
- Develop Union Catalogue
- Provide Automated search and retrieval for all the constituent colleges
- Sharing of bibliographies and subject Index
- Can Check lists of new arrivals
- Reduce efforts and enhance efficiency.

8. Reprographic and Document Delivery

Facilities:

At present, most libraries under SKNAU have reprographic facilities, but they are often used to meet only local demands. By strengthening document scanning and delivery systems (e.g., PDF delivery via email or intranet), SKNAU can establish an inter-library document delivery service (IDDS). This would allow:

- Students to access rare materials from the Central Library at remote campuses
- Faculty to access academic papers, reports, or grey literature stored in other colleges

- Enhanced cloud-based platforms and centralized file-sharing tools (e.g., Google Drive, D Space), and integration with ICAR repositories for example Krishikosh.

9. Moving Toward a SKNAU Digital

Resource-Sharing Network:

Digital India, One Nation One Subscription (ONOS), and Viksit Bharat Abhiyan aiming to create a digitally connected and equitable academic environment and with these national initiatives SKNAU has an opportunity to:

- Develop a collaborative library consortium model
- Share print and digital collections through this model, and
- Provide seamless access to faculty, researchers, and students of Sknau

This would not only ensure optimum use of limited resources but also set a benchmark in academic collaboration across agricultural universities in Rajasthan and India.

Resource-Sharing at SKNAU

Factor	Current Status	Recommendation
Resource transparency	Partially available	Develop a union catalog via KOHA
Collection size disparity	Central vs. college libraries	Use interlibrary loan + subject specialization
Staff for technical services	More staff required	Centralize classification and cataloguing
Standard cataloging practice	Not yet unified	Implement DDC + RDA across libraries
Document delivery	Only for local users	Digitise & create an IDDS system
Digital repository access	CeRA and Krishikosh supported	Full integration & federated access

10. Areas for Resource Sharing of

Agricultural Libraries at SKNAU, Rajasthan

At present, in **Rajasthan**, agricultural teaching, research, and extension activities are carried out by state agricultural universities, including **Sri Karan Narendra Agriculture University (SKNAU), Jobner**, and its affiliated colleges and research centers. Agriculture Institutes plays a vital role in Education, Innovation and Extension Activities in India and Rajasthan. The scope of this study is limited to the libraries under **SKNAU**, which are distributed across various campuses in Rajasthan, including **Jobner, Fatehpur, Bharatpur, Lalsot, Jhalawar**, and others. The **recurring cost of journal subscriptions**, particularly foreign publications, continues to increase of over **15–20% annually**. Many essential serials—including CAB abstracts, advances, and translated scientific literature are still unavailable in most libraries. This gap can be efficiently bridged through **resource sharing** and **collaborative acquisition planning**, ensuring that at least one copy of critical materials is available somewhere within the SKNAU system. Recognizing these issues, SKNAU has the potential to lead a **model resource-sharing programme** for Rajasthan, supported by:

- The Government's **Digital India infrastructure**
- **One Nation One Subscription (ONOS)** for digital access
- National vision under **Viksit Bharat Abhiyan**

11. Suggested Collaborative Activities for SKNAU Libraries:

To strengthen and formalize a resource-sharing model within SKNAU, the following collaborative actions are proposed:

11.1 Co-operative Acquisition (based on specialization in a field)

One of the biggest problems is that each library doesn't have enough money. There should be a subject-based acquisition plan, where each library concentrates on getting materials in specific fields.

For instance:

- The SKN College of Agriculture in Jobner could focus on soil science and agronomy.
- The College of Agriculture in Bhagalpur might focus on horticulture and plant pathology.
- The Lalsot or Fatehpur campuses could focus on seed technology and agribusiness.
- The College of Dairy Science and Technology might focus on dairy products and technology.
- SKNAU can cover all areas by eliminating duplication and organizing coordinated acquisitions.

11.2 Sharing resources and borrowing books from other libraries

A subject-specialized acquisition approach will require a strong interlibrary loan (ILL) system. To make this happen:

- A set of rules should be made for how long people can borrow money, how much they can borrow, and what comes first.
- The Central Library in Jobner could set up a central ILL desk.

11.3 Making the Union Catalogue and Bibliographic Database

- All SKNAU libraries shall put up and keep up to date a unified catalog of all their holdings. Why Libraries should employ KOHA platforms to make their catalogs more consistent.
- Sharing bibliographic records will speed up the search for documents and keep them from being duplicated.

11.4 Sharing of publications and extra resources

Many SKNAU libraries have extra copies of books or materials that aren't used too often. There should be a formal way to:

- Share these kinds of materials between libraries
- Fill in the gaps in your collection
- Make departmental holdings stronger

11.5 Services for bibliographies and reproductions

Libraries should work together on:

- Making and sharing bibliographies, lists of documents, and subject indexes.
- Services for photocopying and scanning at one place
- Delivering documents between campuses, especially theses, uncommon reports, and information in regional languages.

11.6 Training and building capacity for staff:

To make a cooperative library network work well, you need to:

- People who know what they're doing
- Digital library management training classes that last a short time
- Handling metadata, making catalogs, and teaching people how to use computers
- The Central Library in Jobner could be a Resource and Training Center that

helps other libraries by hosting workshops and internships.

11.7 Setting up a Regional Information Center (Long-Term Goal): Once the basic systems are in place, SKNAU can set up a Regional Agricultural Information and Knowledge Center.

This center could:

- Help all of the colleges in the area
- Allow people who aren't on the same network to access licensed content.
- Plan and make changes to policies and training

11.8 Serve as a digital gateway for SKNAU's research results and data stores:

By using this collaborative architecture, SKNAU can turn its libraries from isolated knowledge silos into a fully networked, digitally empowered academic resource system. This would make teaching, research, and new ideas in agriculture better in Rajasthan. **Areas for Resource Sharing at SKNAU**

Area	Proposed Action
Acquisition	Subject-based cooperative purchasing plan
Interlibrary Loan	SKNAU-wide ILL system with code of practice
Union Catalogue	KOHA-based shared catalog updated regularly
Exchange of Publications	Redistribution of duplicates and excess copies
Bibliographic Services	Jointly prepared subject bibliographies and documentation lists
Document Delivery	Shared reprographic/digital services for seamless access
Staff Development	Training programmes through Central Library or via ICAR/NAARM partnerships

SKNAU can turn its libraries from isolated knowledge silos into a fully networked, digitally empowered academic resource system by using

this collaborative architecture. This would improve agricultural teaching, research, and innovation in Rajasthan.

12. Network Organization (SKNAU)

A shared computer network is a good way for the Sri Karan Narendra Agriculture University (SKNAU) libraries to exchange resources with other libraries in the state. These libraries are all part of the same university system and have identical rules, thus a simple and dependable architecture can allow online access to e-resources, union catalogs, and inter-library services.

Ring (Loop) Topology is the model that was suggested.

In a ring (loop) network (Fig. 1), each library is connected to two other libraries, making a circular circle. Each node stores and shares resources for its own topic areas and works with other nodes utilizing technologies that work together (for example, shared ILS, discovery tools, and authenticated e-resource access).

SKNAU NETWORK ORGANIZATION

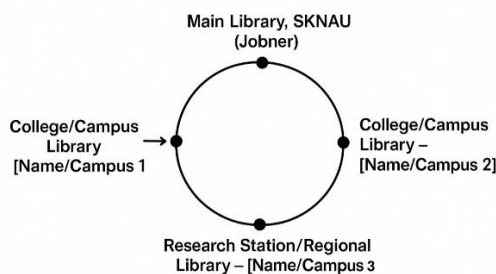


Fig. 1. SKNAU Library Ring (illustrative)

- Main Library, SKNAU (Jobner)
- College/Campus Library – [Name/Campus 1]
- College/Campus Library – [Name/Campus 2]

- Research Station/Regional Library – [Name/Campus 3]

13. Conclusion

The proposed resource sharing program for SKNAU and Jobner Libraries has a lot of different information sources. Right now, libraries are trying to work together on bibliographical and technical issues by hand. The proposed networking program will help agricultural development by providing the scientific research and training support that SKNAU initiatives need. It will also help libraries that are part of SKNAU, Jobner, make better use of their resources to provide better information services at a lower cost.

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