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Digital Library Services in Government Agriculture Colleges of Rajasthan: A Study

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Abstract

This research article aims to explore the utilization and significance of digital library services in government agriculture colleges located in Rajasthan. The study focuses on the background and importance of digital libraries in the context of agricultural education. Additionally, it provides an overview of the government agriculture colleges in Rajasthan, highlighting their role in promoting agricultural research and education. The research employs a mixed-methods approach, combining qualitative and quantitative data collection methods to gather insights on the current state of digital library services in these institutions. The findings of this study can help identify areas for improvement and contribute to enhancing the quality of agricultural education in Rajasthan.

Keywords: Digital library services, government agriculture colleges, Rajasthan, agricultural education, research.

INTRODUCTION

Background of Digital Libraries in Agricultural Education

Digital libraries have emerged as valuable resources in the field of education, offering vast collections of digital resources such as e-books, research articles, multimedia materials, and databases. These digital repositories provide convenient access to information and promote collaborative learning and research. In the context of agriculture education, digital libraries play a crucial role in providing students and researchers with up-to-date and relevant information, facilitating their academic and research endeavors.

Significance of Digital Libraries in Agricultural Education

The significance of digital libraries in agricultural education is multi-faceted. They enable students and faculty members to access a wide range of agricultural literature, research publications, and scientific databases. Digital libraries also enhance the learning experience by providing interactive and multimedia-rich resources. Furthermore, these repositories support collaborative research efforts, knowledge sharing, and innovation in the field of agriculture.

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Overview of Government Agriculture Colleges in Rajasthan

Role of Government Agriculture Colleges

Government agriculture colleges in Rajasthan are crucial institutions dedicated to agricultural education and research. They aim to develop skilled agricultural professionals who can contribute to the sustainable development of the agricultural sector in the state. These colleges offer undergraduate and postgraduate programs in agriculture, horticulture, animal husbandry, and related disciplines. Additionally, they conduct research projects and provide extension services to disseminate knowledge and technology among farmers.

Current State of Digital Library Services

This study aims to assess the current state of digital library services in government agriculture colleges of Rajasthan. It investigates the availability of digital resources, the infrastructure supporting digital libraries, and the utilization of these services by students and faculty members. The research employs a mixed-methods approach, including surveys and interviews, to gather comprehensive data on the challenges and opportunities in implementing and enhancing digital library services.

The present study aims to investigate the status of digital library services in government agriculture colleges in Rajasthan, India. The research focuses on various colleges across the state, including Government Agriculture College in Jodhpur, Pali, Nagaur, Lalsot in Dausa, Kumher in Bharatpur, Fatehpur in Sikar, Bhilwara, Bikaner, Sriganganagar, Kota, Kishangarhbas in Alwar, Kotputli in Jaipur, SKN College of Agriculture in Jobner, BBD College of Agriculture in Chimanpura, Rajasthan College of Agriculture in Udaipur, Captain Ripudaman Government College of Agriculture in Sawai madhopur, Govind Guru PG College of Agriculture in Banswara, Government College of Horticulture in Jhalwarar, Government College of Fisheries in Udaipur, College of Community and Applied Science in Udaipur, College of Dairy Science and Food Technology in Udaipur, and College of Dairy Technology in Jodhpur.

This research endeavors to assess the availability and effectiveness of digital library services in these government agriculture colleges, considering factors such as access to digital resources, online databases, e-journals, e-books, research articles, and other relevant academic materials. By examining the current status of digital library services in these institutions, this research aims to provide valuable insights and recommendations for enhancing and improving the provision of digital resources in government agriculture colleges in Rajasthan.

Sr. no	Government Agriculture Colleges in Rajasthan
1	Government Agriculture college Jodhpur
2	Government Agriculture college Pali
3	Government Agriculture college Nagaur
4	Government Agriculture college Lalsot , Dausa
5	Government Agriculture college kumher, Bharatpur
6	Government Agriculture college fatehpur, Sikar
7	Government Agriculture college Bhilwara
8	Government Agriculture college Bikaner
9	Government Agriculture college Sriganganagar
10	Government Agriculture college Kota
11	Government Agriculture college kishangarhbas, Alwar
12	Government Agriculture college kotputli, Jaipur
13	Government SKN college of Agriculture jobner, Jaipur
14	Government BBD college of agriculture chimanpura, Jaipur
15	Rajasthan collge of Agriculture Udaipur
16	Sahid captain Ripudaman Gvernment college of Agriculture Sawaimadhopur
17	Govind Guru PG college of agriculture Banswara
18	Government college of horticulture Jhalwarar
19	Government college of fisheries Udaipur
20	College of community and applied science Udaipur
21	College of dairy science and food technology Udaipur
22	College of dairy technology Jodhpur

LITERATURE REVIEW

Digital library services play a vital role in providing access to academic resources, research materials, and information to support teaching, learning, and research activities in educational institutions (Chowdhury & Chowdhury, 2013; Yu, 2018). This literature review aims to explore the existing body of knowledge regarding digital library services in government agriculture colleges, focusing on studies related to India and other

relevant contexts.

Studies have highlighted the importance of digital libraries in agricultural education and research. For instance, Chatterjee and Roy (2015) conducted a study on the adoption and utilization of digital resources in agricultural institutions in India. They emphasized the need for comprehensive digital library services to address the diverse information needs of agricultural students and researchers. Furthermore, Paliwal and Kumawat (2017) examined the role of digital libraries in enhancing agricultural education and found that access to digital resources positively influenced students' learning outcomes and research productivity.

According to Panda and Dash (2016), limited infrastructure, inadequate funding, and lack of technical expertise pose significant obstacles to the establishment and maintenance of digital libraries in India. Similarly, Gupta and Bhardwaj (2018) identified factors such as copyright issues, limited awareness among faculty and students, and inadequate training programs as barriers to the effective utilization of digital library services in agricultural colleges.

On the other hand, successful case studies and best practices related to digital library services in agriculture colleges provide insights for improvement. Sharma and Singh (2019) examined the digital library initiatives at two agricultural universities in India and highlighted the importance of user-centric services, collaboration with stakeholders, and continuous evaluation and enhancement of digital library resources and platforms.

While these studies provide valuable insights into digital library services in educational institutions, there is a dearth of research specifically focusing on government agriculture colleges in Rajasthan. Therefore, this study intends to fill this gap by conducting a comprehensive assessment of digital library services in the government agriculture colleges of Rajasthan, considering the unique needs and challenges faced by these institutions.

STATEMENT OF THE PROBLEM

Despite the increasing significance of digital library services in facilitating access to agricultural information and supporting academic activities, there is a lack of comprehensive understanding regarding the status and effectiveness of these services in government agriculture colleges in Rajasthan, India. This study aims to address this gap by investigating the current state of digital library services in these colleges and identifying the challenges and opportunities associated with their implementation.

The problem statement revolves around several key issues. Firstly, there is limited research specifically focused on digital library services in government agriculture colleges of Rajasthan, which hinders the development of tailored strategies and initiatives to enhance these services. Additionally, the unique needs and challenges faced by these institutions, such as inadequate infrastructure, limited funding, and technical expertise, may impact the availability and quality ofdigital resources.

OBJECTIVE OF THE STUDY

The study on digital library services in government agriculture colleges of Rajasthan will focus on the following four objectives pertaining to librarians/ library manager:

1. Assess the existing digital library infrastructure and technology available to librarians inthese colleges.
2. Investigate the librarian's proficiency in utilizing digital tools and platforms to supportacademic and research activities.
3. Identify any challenges faced by librarians in managing and curating digital collections effectively.
4. Gather feedback from librarians to understand their perspectives on enhancing digital library services and potential areas of improvement.

SCOPE OF THE STUDY

The scope of this study on digital library services in government agriculture colleges of Rajasthan is to provide a comprehensive assessment of the current state of digital resources, technology, and infrastructure available to librarians. The research aims to identify challenges and opportunities for improving digital collection management, enhancing librarian proficiency, and fostering collaboration with faculty and researchers. The study's findings will contribute valuable insights to inform strategic decisions in implementing effective digital library services, ultimately benefiting the academic community and advancing agricultural research and educationin the region.

RESEARCH METHODOLOGY

For the present study " Digital library services in government agriculture college of Rajasthan: A study" the survey method has been applied. Under survey method quantitative data will be gathered through structured questionnaires distributed to librarians in the selected colleges to assess their access to digital resources, proficiency in utilizing technology, and collaboration with faculty. Additionally, qualitative data will be collected through interviews and focus group discussions with librarians to gain deeper insights into their experiences, perceptions, and suggestions. The data collected will be analyzed using appropriate statistical methods for quantitative data and thematic analysis for qualitative data. The combination of both quantitative and qualitative methods will provide a holistic understanding of the current state of digital library services and aid in formulating meaningful recommendations for improvement.

DATA ANALYSIS AND INTERPRETATION

The data analysis and interpretation of the study on digital library services in government agriculture colleges of Rajasthan will involve a comprehensive approach. Firstly, data will be collected through surveys distributed among the librarians of the 22 selected colleges, gathering information about the availability and accessibility of digital resources, technology infrastructure, and collaboration efforts. The quantitative data will be analyzed using descriptive statistics to understand the overall trends and patterns. Secondly, interviews will be conducted with the librarians to gain deeper insights into their experiences and perspectives on challenges and opportunities related to digital library services. The qualitative data will be analyzed using thematic analysis to identify recurring themes and valuable suggestions. The integration of survey data and interview findings will facilitate a holistic interpretation, providing valuable recommendations for enhancing digital library services in government agriculture colleges across Rajasthan. The survey, was taken among the 22 selected libraries of Rajasthan, the raw data collected from the select libraries which are presented in *table 1* to *4*.

Status of Digitization

Table 1 Status of Digitization

Status of Digitization	Number of Libraries	Percentage
Fully Digitized	05	23%
Partially Digitized	03	14%
Proposed Planning	06	27%
Not Digitized	08	36%

In this table Approximately 23% of the libraries are "Fully Digitized," indicating a significant advancement in their digital resources and services. Around 14% are "Partially Digitized," suggesting some progress in digitization efforts but with room for improvement. 27% of the libraries are in the "Proposed Planning" stage, indicating they have plans for digitization but have not fully implemented them yet. The study found that 36% of the libraries are "Not Digitized," highlighting a significant portion that lacks any digital library services.

Table 2: Availability of Infrastructure, Internet facility and Digital Library Services

Availability of Infrastructure, Internet facility and Digital Library services	Number of Libraries	Percentage
Uses of Digital Library software	05	23%
Avalibility of computer	22	100%
Availability of off line databse	11	50%
Subscription of E- Journal	14	64%
Subscription of E-Books	14	64%
Subscription of E-Database	13	59%
Consortium membership	09	41%
CeRa Link	16	73%
CAB Services	12	55%
Open Access Journal Services link	09	41%
National digital library link	20	91%
Online public access catalogue	16	73%
Web online public access catalogue	08	36%
Current awareness services	05	23%
CD ROM services	014	64%
Email services	20	91%

Availability of Infrastructure, Internet facility and Digital Library services	Number of Libraries	Percentage
E-Document delivery services	05	23%
E thesis services	08	36%
Free internet services	15	68%
Free download services	09	41%

Table 2 presents the availability of infrastructure, internet facilities, and digital library services in government agriculture colleges across Rajasthan. Out of the 22 libraries surveyed, 100% reported the availability of computers, indicating a strong technological foundation. Regarding digital library software usage, 23% (5 libraries) have implemented such systems to manage their resources efficiently. Approximately 50% (11 libraries) reported having access to offline databases, while 64% (14 libraries) have subscribed to E-Journals and E-Books. Consortium membership stands at 41% (9 libraries). Notably, 91% (20 libraries) are linked to the National Digital Library, enhancing access to a vast array of academic resources. Other services, like email facilities (91%), CD ROM services (64%), and free internet access (68%), demonstrate significant adoption in these government agriculture college libraries.

Table 3: Librarian's proficiency in utilizing digital tools

Librarian's proficiency	Number of Libraries				
	Rating				
	1	2	3	4	5
Proficiency in using digital library software	06	03	04	03	06
Proficiency in using e-journal portals	01	01	04	05	11
Using digital tools for cataloging	03	04	02	06	07
Proficiency in utilizing online databases	06	03	04	03	06
Assist faculty and researchers with their information needs using digital resource	04	05	03	04	06

The table presents the librarian's proficiency in utilizing digital tools in government agriculture colleges in Rajasthan, rated on a scale from 1 to 5. From the data analysis, it can be observed that 6 libraries rated their proficiency in using digital library software as 5, indicating a high level of expertise. However, for e-journal portals and online databases, the proficiency ratings were more varied, with 11 libraries rating their proficiency as 5 in using e-journal portals. The librarian's ability to assist faculty and researchers with digital resources received mixed ratings. Overall, there is a substantial level of proficiency among librarians in using digital tools, which can positively impact academic and research activities in these government agriculture colleges.

Table 4: Challenges in Functioning Digital Library Services

Challenges in functioning Digital Library services	Number of Libraries	Percentage
Lack of funding	20	91%
Lack of staff skills	12	55%
Lack of technical knowledge	11	50%
Lack of development polices	05	23%
Insufficient infrastructure	18	82%
Lack of management support	16	73%
Lack of interest in digital initiatives	03	14%
Lack of team work	04	18%

Challenges in functioning Digital Library services	Number of Libraries	Percentage
Lack of trained staff	16	73%
Network problem	04	18%
Technological obsolesce	02	09%

Table 4 presents the challenges faced by government agriculture colleges in Rajasthan while functioning their digital library services. The data highlights several key issues. The most prominent challenge is the "Lack of funding," which is reported by 91% of the libraries surveyed. "Insufficient infrastructure" and "Lack of staff skills" are also significant obstacles, reported by 82% and 55% of libraries, respectively. Moreover, "Lack of technical knowledge" and "Lack of trained staff" each account for 50% and 73% of the surveyed institutions, respectively. Other challenges include "Lack of management support" (73%), "Network problem" (18%), and "Lack of team work" (18%). Addressing these challenges is crucial to improving the effectiveness and efficiency of digital library services in government agriculture colleges across Rajasthan.

DISCUSSION

1. The *table 6.1* presents the status of digitization in government agriculture colleges' libraries in Rajasthan. Out of the 22 libraries surveyed, only 23% (5 libraries) have achieved full digitization of their resources. Another 14% (3 libraries) are partially digitized, indicating they have made some progress but not fully transitioned to digital formats. A significant portion, 27% (6 libraries), are in the planning phase, with proposed efforts for digitization. However, a concerning 36% (8 libraries) have not yet initiated any digitization efforts and remain entirely non-digitized.
2. The *table 2* presents the status of digitization and availability of infrastructure, internet facilities, and digital library services in government agriculture colleges of Rajasthan. Out of the 22 libraries surveyed, all have computer facilities available, indicating a 100% availability. However, there is variation in the adoption of digital library software, with only 23% of the libraries reported using such software.
3. From *Table 6.3*, it can be observed that librarians in government agriculture colleges of Rajasthan exhibit varying levels of proficiency in utilizing digital tools and platforms. Notably, 6 out of 22 libraries (27%) have a highly proficient rating (5) in using digital library software, indicating a strong foundation in this area. However, in terms of utilizing e-journal portals, only 11 libraries (50%) received a rating of 4 or 5, suggesting room for improvement in supporting research activities through these platforms. Similarly, in using digital tools for cataloging and online databases, the proficiency ratings were relatively balanced across the scale. In assisting faculty and researchers with information needs through digital resources, 12 libraries (55%) received a proficient rating of 4 or 5.
4. From *Table 6.04*. Lack of Funding: A significant 91% of the surveyed libraries reported facing financial constraints, hindering their ability to invest in and maintain robust digital library services.
5. From *Table 6.4*. Lack of Staff Skills: Approximately 55% of the libraries revealed that their staff lacked the necessary skills and expertise to effectively utilize and manage digital resources.

CONCLUSION / RECOMMENDATIONS

1. Encourage Collaboration: Libraries in the planning phase and those not yet digitized could benefit from collaborating with fully digitized libraries to share best practices, resources, and expertise. Promoting knowledge-sharing workshops or webinars can help accelerate digitization efforts across all libraries.
2. Funding Support: The government and relevant authorities should allocate sufficient funds and resources to support digitization initiatives in agriculture colleges' libraries. Financial assistance can facilitate the purchase of digital resources, necessary technology, and training for librarians to ensure a smooth

transition towards digital library services.

3. Promote Digital Library Software Adoption: Since only 23% of the libraries currently use digital library software, there is a need to encourage and support other libraries in adopting such software. This will enable better organization, management, and access to digital resources, leading to an improved learning and research experience for students and faculty.
4. Enhance Off-Line Database and E-Journal Subscriptions: While computer availability is high, only 50% and 64% of the libraries have off-line database and E-journal subscriptions, respectively. To strengthen research capabilities, colleges should consider investing in more off-line databases and E-journal subscriptions, providing users with access to a wider range of academic resources and enhancing the quality of education and research in agriculture colleges.
5. Based on the findings, it is recommended to focus on enhancing training and support for librarians in utilizing e-journal portals effectively. Additionally, providing targeted workshops on advanced functionalities of digital library software and online databases can help increase proficiency levels. Collaboration among librarians to share best practices and experiences in using digital tools for cataloging and managing digital collections can also be encouraged. Furthermore, conducting regular assessments and workshops to update the librarians' knowledge on new digital tools and technologies would contribute to overall improvement in their proficiency. By implementing these suggestions, government agriculture college libraries in Rajasthan can enhance their support for academic and research activities, further benefiting faculty, researchers, and students alike.
6. Increase Funding: Address the lack of funding by allocating additional resources to support the development and maintenance of digital library services. This will enable the acquisition of modern technologies and digital resources, improving overall service quality.
7. Staff Training and Development: Prioritize training programs and workshops to enhance the technical skills and knowledge of library staff. Providing them with the necessary training will empower them to effectively manage digital collections and support users' needs.

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