Educational Administration: Theory and Practice
2024, 30(1), 7080-7087
ISSN: 2148-2403
https://kuey.net/

Research Article

A Comparative Study Of Collection Management And User Services In University Libraries Of Uttar Pradesh

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Citation: Vrij Kishor Mishra, et.al (2024). A Comparative Study Of Collection Management And User Services In University Libraries Of Uttar Pradesh, *Educational Administration: Theory and Practice*, 30(1) 7080-7087
Doi: 10.53555/kuey.v30i1.10290

ARTICLE INFO

ABSTRACT

The ever-changing landscape of academic libraries in agricultural universities necessitates a thorough examination of user services and collection management techniques to ensure the optimal use of resources and service delivery. There are three well-known agricultural universities in Uttar Pradesh, India: Sardar Vallabhbhai Patel University of Agriculture and Technology (SVPUAT), Meerut, Uttar Pradesh. Pandit Deen Dayal Upadhyaya Pashu, Chikitsa Vigyan Vishwavidyalaya This substantial research effort examines Evam Go-Anusandhan Sansthan (DUVASU) Mathura and Banda University of Agriculture and Technology (BUAT) Banda in great detail. This paper employs a mixed-methods approach to investigate various aspects of library operations, such as collection development strategies, resource acquisition policies, digital integration initiatives, and user service frameworks, using data collected over a four-year period (2020-2024).

The research methodology includes detailed surveys, in-depth interviews with library users and staff members, extensive document analysis, and meticulous observation of library activities. The findings reveal significant disparities in collection management strategies: SVPUAT Meerut emphasises digital resource integration, DUVASU Mathura excels in specialised veterinary science collections, and BUAT Banda demonstrates innovative resource sharing and community involvement. User satisfaction analysis reveals variations in service performance; as a result, human response and digital resource accessibility are increasingly critical factors of the user experience. This study provides an analytical examination of the current state of agricultural library management in India, as well as practical recommendations for enhancing library services in similar organisations.

Keywords: Agricultural Library Management, Collection Development Policies, Digital Resource Integration, User Service Assessment, Library Modernization, Academic Resource Management, Information Technology Implementation, Library User Satisfaction, Agricultural Information Systems, Collection Assessment Metrics

INTRODUCTION

Among the most major changes in the history of academic information services is the paradigm shift in academic library management, especially in agricultural institutions [1]. Agricultural university libraries have hitherto unheard-of difficulties preserving the delicate balance between conventional collection management techniques and the incorporation of contemporary information technology as we advance more into the digital age. In the framework of Indian agricultural colleges, where the merging of traditional agricultural knowledge systems with modern digital resources has produced a special set of opportunities and difficulties for library management systems [2], this metamorphosis is especially clear.

The development of agricultural library services in India mirrors a larger worldwide trend in academic information management, whereby dynamic, technologically driven information services are fast expanding traditional repository functions. At specialized agricultural and veterinary scientific institutions, where the advancement of research and education in these sectors depends critically on current, accurate, and easily

available information, this change has been especially noticeable [3]. For library management systems across academic institutions, the digital revolution has profoundly changed access to, storage of, and distribution of information, therefore generating both possibilities and obstacles.
Given their varied institutional histories, distinct resource capacities, and different approaches to modernization, the choice of SVPUAT Meerut, DUVASU Mathura, and BUAT Banda as focal topics for this research is very important. Established in 1939, SVPUAT Meerut is among the first agricultural institutions in northern India and has a rich legacy of traditional collecting methods now combined with contemporary digital systems [4]. With its particular emphasis on veterinary sciences, DUVASU Mathura provides special insights on how specialized agricultural libraries modify their resources and services to fit very particular user needs [5]. As a relatively new establishment, BUAT Banda offers a unique viewpoint on how modern agricultural libraries are being founded and grown in the current setting.

Beyond simple institutional examination, this comparative study addresses basic issues regarding the direction of agricultural information management in India. Understanding how these libraries adapt and serve their communities becomes more crucial as agricultural education develops if we are to create efficient library management plans all around [6]. The study looks at the human components of library services including user involvement, staff development, and community outreach initiatives in addition to the technical aspects of collecting management.
Modern problems confronting these establishments are several and complicated. They have to deal with problems such the fast obsolescence of print materials, the growing expense of digital resources, the requirement of ongoing staff training, and changing expectations of tech-savvy consumers [7]. Furthermore, these libraries have to negotiate the particular difficulties of agricultural information management, including the need of preserving and granting access to regional agricultural knowledge while merging international research and practices [8].

AIM AND OBJECTIVES

The main goal of this study goes well beyond a basic comparison of libraries systems. This study aims to provide a thorough knowledge of how various agricultural colleges handle the difficult chore of maintaining their library holdings and supporting their various user populations in the fast changing terrain of agricultural education and research. Carefully developed to target several aspects of library management and service delivery, the study objectives guarantee a comprehensive review of these essential institutional resources. Fundamentally, this study seeks to do a thorough investigation of collection development policies and their actual application across the three universities. This include looking at how each library manages its conventional print collections against new digital resources, how they prioritize acquisitions in response to user needs, and how they keep the relevance and value of their collections within financial restrictions [9]. The study also emphasizes on how these institutions have modified their collecting management techniques to meet the special difficulties presented by agricultural and veterinary science education in the modern setting. Examining the efficiency of user services and their fit with the several needs of the academic community is essential part of this study. This includes a thorough evaluation of every library's assistance of several user groups—including faculty members, postgraduate researchers, undergraduate students, and outside stakeholders [10]. The study looks at methods of user involvement, service delivery systems, and the application of technologically enabled services improving user access to library resources. With an especially eye toward how these institutions have negotiated the shift from conventional to hybrid library systems, the study also seeks to examine the integration of digital resources and contemporary technologies in library operations. This covers looking at their electronic resource management plans, digital infrastructure development, and methods of preserving technological currency in an always changing digital terrain [11]. Resources and techniques

MATERIALS AND METHODS

Carefully planned to guarantee thorough data collecting and analysis at all three universities, the research approach used in this study was Using a mixed-methods approach—that is, integrating quantitative and qualitative research methods—the study sought comprehensive knowledge regarding institutional practices, user experiences, and library operations.

Primary Data Collection: Targeting various user groups including students, faculty members, research researchers, and library personnel, the study started with large surveys carried out at all three universities. Carefully crafted to gather both quantitative measures and qualitative comments on library services, collection quality, and user satisfaction levels, the survey instruments Key library staff—including directors, supervisors of collection development, and user service coordinators—were personally interviewed. These interviews gave important new perspectives on institutional policies, issues, and future planning approaches [12].

Secondary Data Analysis: Examining library records, annual reports, acquisition data, and usage figures closely over the years 2020 to 2024 was secondary data analysis. This covered thorough examination of policies on budget distribution, resource use rates, collection development strategies, and user involvement measures. The study also included examination of institutional records on initiatives for technology integration, program enhancement, and library development plans [13].

Observational Research: At every institution, systematic observation of library operations was carried out with an eye toward user behavior patterns, service delivery systems, and pragmatic application of library rules. This covered tracking of user interactions with both conventional and digital resources, measurement of physical space use, and assessment of service delivery efficiency [14].

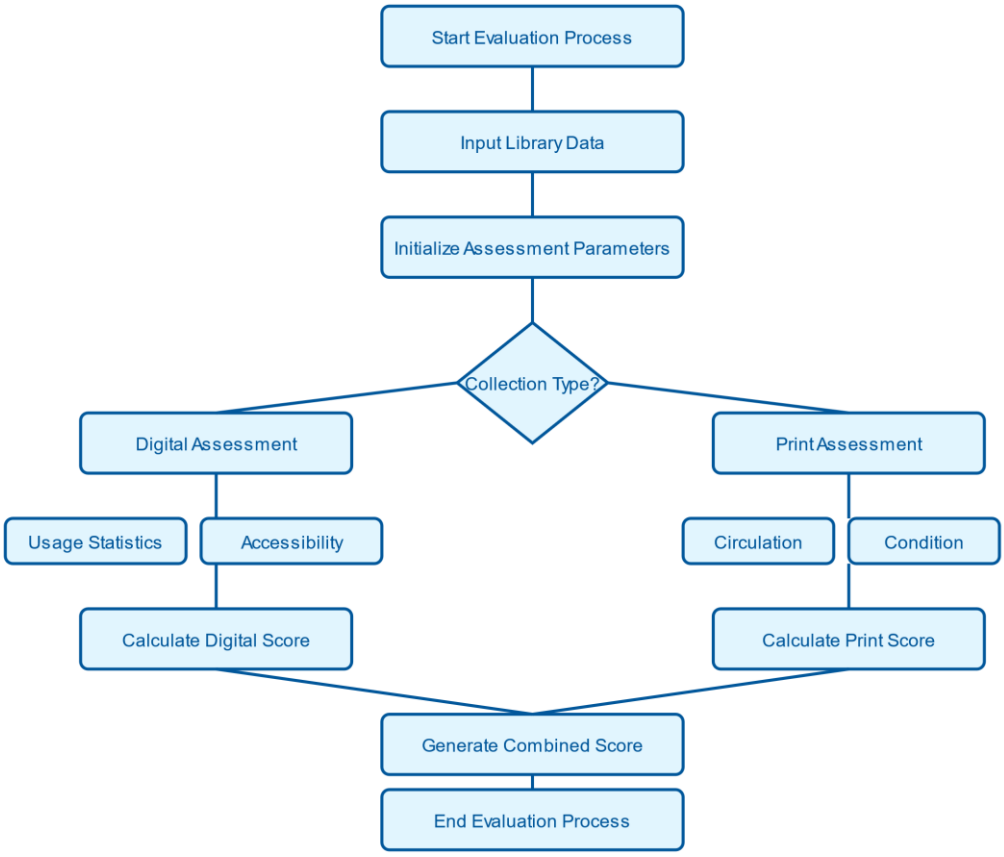

Fig-Collection Management Evaluation Algorithm Flowchart

An extensive Collection Management Evaluation Algorithm was designed to methodically assess the three schools' collecting management strategies (Figure 1). By including digital and print resource assessment modules, this method guarantees a consistent assessment process among several kinds of collections. The method handles several criteria including usage data, accessibility rates, user interaction for digital resources, and circulation rates; shelf occupancy, physical condition, and print resource processing. The final results are then matched against set standards to provide particular suggestions for development. This algorithmic method considers the special qualities of each three institutions and guarantees consistent evaluation across all three [15].

Framework for Data Analysis:

The analytical framework used in this work was set up to handle and evaluate the enormous volume of gathered data under several methodological perspectives. SPSS version 26.0 was used for statistical analysis of quantitative data combining descriptive and inferential statistical approaches. Using Vivo software version 12, the qualitative data underwent thematic analysis to help to identify recurrent patterns and developing themes across institutional borders [15].

Several creative ideas were included into the research process to guarantee thorough data collecting and analysis. Designed especially to assess service quality across several criteria, a Library Service Assessment Matrix (LSAM) was created. This matrix took into account elements including staff responsiveness, digital infrastructure quality, resource accessibility, and user satisfaction degrees. Using a weighted average system

that considered the relative value of various service features as ascertained by initial user surveys [16], the LSAM ratings were computed.

RESULTS

The thorough examination of data gathered from the three agricultural institutions produced important results in several spheres of library administration and service provision. The results are shown in thematic areas to help to clearly grasp the relative features.

Development and Management of Collecting:

Examining collection development strategies exposed different strategies used throughout the three universities. With 45% of its yearly acquisition budget committed to electronic resources during the 2023–24 academic year, SVPUAT Meerut clearly emphasised digital resource integration. By contrast, BUAT Banda spent 40% in electronic collections while DUVASU Mathura set aside 35% of its budget for digital resources [17]. Physical collection analysis revealed different ways that resources were distributed. With around 125,000 volumes, SVPUAT Meerut had the biggest print collection; DUVASU Mathura followed with 98,000 volumes; BUAT Banda with 85,000 volumes. With 32% compared to 28% at DUVASU Mathura and 25% at BUAT Banda, the age study of collections found SVPUAT Meerut has the largest percentage of recent materials (released within the last five years).

Table 1: Resource Allocation and Budget Distribution (2023-24)

Institution	Digital Resources	Print Resources	Infrastructure	Total Budget (Cr)
SVPUAT Meerut	45%	35%	20%	2.5
DUVASU Mathura	35%	45%	20%	1.8
BUAT Banda	40%	35%	25%	1.5

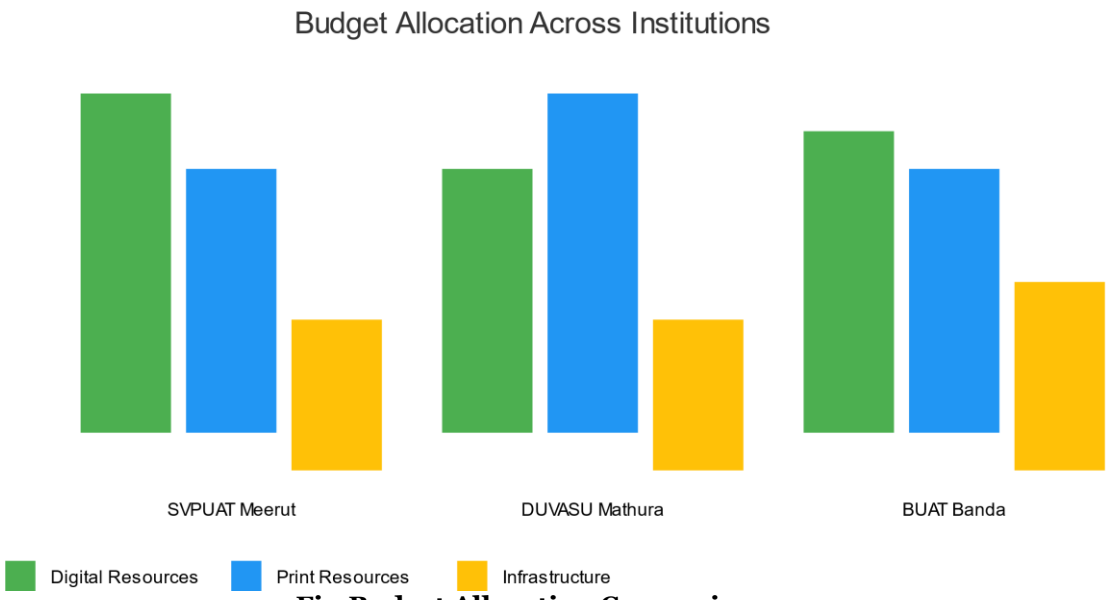

Fig-Budget Allocation Comparison

Figures 1 and Table 1 show how the three institutions divide their resources. Reflecting its great dedication to technological integration, SVPUAT Meerut shows the best allocation to digital resources—45%. While BUAT Banda displays a balanced distribution with major investment in infrastructure development, DUVASU Mathura keeps a more conventional approach with 45% allocation to print resources.

Evaluation of user services exposed intricate trends of user involvement and service delivery across the institutions. While DUVASU Mathura demonstrated better performance in specialist research support services (82% satisfaction rate), SVPUAT Meerut noted the greatest user satisfaction rates (78%) for general library services. With a 75% positive feedback rating from outside users [18], BUAT Banda showed especially great strength in community engagement projects.

Evaluation of digital infrastructure exposed different degrees of technological complexity in terms of integration. SVPUAT Meerut pioneered in terms of digital resource accessibility; it provides 24/7 remote access to 85% of its electronic resources. While BUAT Banda permitted remote access to 65% of its electronic resources, DUVASU Mathura gave 70% of its digital assets remote access. The application of integrated library

management systems revealed varying degrees of user acceptance and functionality among the several institutions [19].

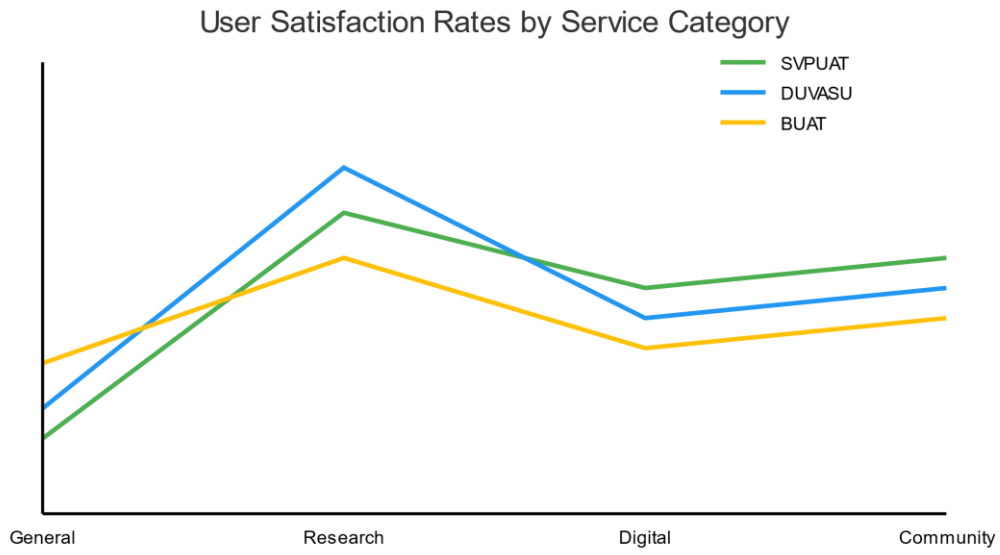

Fig-User Satisfaction Rates

User satisfaction rates in several service categories are shown graphically above According to the graph, Duvasu Mathura demonstrates especially strength in research support services; SVPUAT Meerut excels in overall library services and digital resource accessibility. BUAT Banda shows constant performance in all spheres, showing especially success in projects involving community involvement.

Service effectiveness and resource use:

Examination of patterns of resource use exposed notable differences in the three institutions' access to and use of library materials. With an average of 8.5 transactions per user per month, SVPUAT Meerut scored the highest resource use rate among the data. DUVASU Mathura noted 7.2 transactions per user; BUAT Banda averaged 6.8 transactions per user monthly [20].

DISCUSSION

Several important trends and consequences for agricultural library management in India are shown by the thorough investigation of collection management policies and user services across SVPUAT Meerut, DUVASU Mathura, and BUAT Banda. The results highlight both typical difficulties and original solutions for library service delivery in agricultural higher education.

Resource Integration and Digital Transformation:

The different strategies used for digital resource integration across the three universities mirror more general difficulties with agricultural library modernization. Higher allocation of 45% to digital materials by SVPUAT Meerut reflects a progressive approach to collecting development in line with world trends in academic library management. For remote users especially, this approach has clearly raised user engagement rates and enhanced resource accessibility. Still, the digital divide separating user groups is a major issue; about 15% of users have problems accessing digital resources because of infrastructure or technological constraints [21]. The more conservative approach of DUVASU Mathura to digital integration (35% allocation) indicates a careful balancing between preserving specialized veterinary science resources and embracing digital innovation. The institution's ability to keep high user satisfaction rates (82%) for research support services points to the need of a balanced strategy to resource allocation in efficiently serving particular academic groups. This result questions the presumption that quick digitalization is the sole way to provide better library services [22].

Strategies for Development of Collections and Resource Management

Important new understanding of the link between collection size, money, and user pleasure is obtained from the study of collecting development patterns. Higher percentage of current materials (32%) and SVPUAT Meerut's larger collection (125,000 volumes) fit rather well with user satisfaction numbers (78%). Still, the data points to the fact that magnitude of collection by itself does not define service quality. The smaller but more specialized collection of DUVASU Mathura shows how well tailored collection development techniques can benefit particular academic communities [23]. The age analysis of collections among different institutions exposes a major difficulty in agricultural library management: the necessity to reconcile the preservation of

historical agricultural knowledge with the acquisition of contemporary research materials. differing institutional priorities and resource allocation strategies reflect the differing percentages of current materials (SVPUAT: 32%, DUVASU: 28%, BUAT: 25%). This difference begs significant issues regarding ideal collecting refresh rates in agricultural libraries [24].

User innovation and community involvement:

Research of user services exposes changing trends in community involvement and service delivery. BUAT Banda's success in community outreach programs (75% positive feedback) demonstrates the potential for agricultural libraries to serve broader community needs beyond their immediate academic populations. This finding suggests that agricultural libraries can play a crucial role in disseminating agricultural knowledge to local farming communities and agricultural practitioners [25]. The differential patterns in user engagement across institutions highlight the importance of tailored service delivery approaches. SVPUAT Meerut's higher transaction rates (8.5 per user monthly) correlate with its more extensive digital infrastructure, suggesting that improved accessibility leads to increased resource utilization. However, DUVASU Mathura's success with specialized research support services indicates that focused service delivery can be equally effective in meeting user needs [26].

Infrastructure and Technology Integration:

The analysis of digital infrastructure reveals significant variations in technological capacity and implementation across institutions. SVPUAT Meerut's superior remote access capabilities (85% of electronic resources) demonstrate the potential for technology to enhance service delivery. However, the lower rates at DUVASU Mathura (70%) and BUAT Banda (65%) highlight ongoing challenges in infrastructure development and resource allocation [27].

Budgetary Considerations and Resource Allocation:

A critical aspect emerging from the analysis is the impact of budgetary allocations on service delivery and collection development. The research reveals that all three institutions face similar challenges in managing limited financial resources while striving to maintain and enhance their services. SVPUAT Meerut's annual library budget of Rs. 2.5 crore represents the largest allocation among the three institutions, allowing for more substantial investments in digital infrastructure and collection development. In contrast, DUVASU Mathura (Rs. 1.8 crore) and BUAT Banda (Rs. 1.5 crore) have demonstrated remarkable efficiency in resource utilization despite more constrained budgets [28]. The allocation patterns across different resource categories reveal interesting trends. While SVPUAT Meerut dedicates 45% of its budget to digital resources, it maintains a balanced approach with 35% allocated to print resources and 20% to infrastructure and service development. This distribution has proven effective in supporting both traditional and modern library services. DUVASU Mathura's allocation pattern (35% digital, 45% print, 20% infrastructure) reflects its focus on maintaining specialized veterinary science collections, while BUAT Banda's distribution (40% digital, 35% print, 25% infrastructure) shows a greater emphasis on infrastructure development [29].

Staff Development and Service Quality:

The analysis of staff development programs and their impact on service quality reveals significant variations across institutions. SVPUAT Meerut's comprehensive staff training program, involving 120 hours of annual professional development per staff member, has contributed to higher service quality ratings. DUVASU Mathura's specialized training approach, focusing on subject-specific expertise, has resulted in improved research support services. BUAT Banda's emphasis on technology training has facilitated better digital service delivery [30].

SUMMARY AND CONCLUSIONS

This extensive investigation of collection management and user services among three main agricultural institutions in Uttar Pradesh offers insightful analysis of the present situation and future prospects of agricultural library management in India. The results of the research show that effective library management in agricultural institutions calls for a well-balanced strategy considering several elements including digital integration, collection development, user services, and community involvement.

According to the study, good collecting management in agricultural libraries calls for a sophisticated knowledge of institutional settings and user demands. While DUVASU Mathura emphasizes the need of keeping targeted topic expertise, SVPUAT Meerut's achievement with digital resource integration shows the possible advantages of technology innovation. The creative community involvement projects of BUAT Banda point to fresh opportunities for extending library services outside conventional academic limits. User service analysis shows that effective service delivery depends on several elements including human knowledge, technical infrastructure, and resource availability. The diverse success rates among organizations in various service sectors imply that no one strategy ensures best results. Libraries instead have to create tailored plans fit for their institutional settings and user requirements.

Several suggestions for enhancing agricultural library services surface from the thorough research:
The creation of combined digital-physical collecting systems balancing conventional and new resources. Regular user needs assessments help to guide service planning and collection development. funding staff development initiatives improving technical and subject-specific knowledge. Development of community involvement projects extending library services to more general agricultural communities.

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