IMPACT OF INFORMATION TECHNOLOGY ON THE AGRICULTURAL UNIVERSITY LIBRARIES IN UTTAR PRADESH: A STUDY

ABSTRACT OF
DISSERTATION
SUBMITTED FOR AWARD OF THE DEGREE OF

Master of Philosophy

IN

LIBRARY AND INFORMATION SCIENCE

UNDER THE SUPERVISION OF
Dr. R.K. Choudhary

SUBMITTED BY
Neelam Devi

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ESTABLISHED 1996

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ABSTRACT

INTRODUCTION

Today's technology plays an influential part in shaping things more straightforward and more efficient, therefore saving users ' time that was not feasible in previous days. Use of unified internet library mechanisation systems, understanding of classification and cataloguing schemes, access to local, national and global databases, information systems for agricultural research, all of which can be regarded as part of technological innovations in this area. Without computers and information technology, agricultural libraries can hardly operate today. IT helps alleviate the significant difficulties faced by agricultural libraries and their users. It also helps to provide its customers with better quality, increased productivity, more efficient operations, better sharing of resources and more efficient services. With the participation of information technology, agricultural libraries are now able to handle data in a better and more comfortable manner that involves acquiring, processing, storing, retrieving and disseminating data.

Other operations engaged in information management are reprography, printing and publication. Therefore, libraries function as communication channels. Technology implementation enhances libraries ' function in providing appropriate services and data to their customers. Libraries and data centres now face new difficulties in addressing these technological advances in information technology so that they can alter and adapt to survive in this modern world.

Agricultural science is a broad science which has different fields like Agronomy, Plant Breeding, Soil Science, Horticulture, Fisheries, Sericulture, Plant Pathology, Biotechnology. In today's world, this unique branch of science is not limited to farmers alone, but it has expanded its participation into other areas or disciplines as well, thus becoming a multidisciplinary field in itself. Due to the involvement of engineering and technology, this particular field of science has evolved and spread over various forms of other subjects. Therefore, owing to different kinds of agricultural areas, there is a vast amount of literature available, which includes different kinds of subjects. In assisting customers in gathering information, libraries play a significant role. These agricultural science libraries have a particular

focus on agriculture. In addition to the agriculture, agricultural sciences also play an essential role in the field of schooling, education, research and growth. Agricultural libraries contribute to the promotion of agricultural research and development by providing a unique collection of books, publications, pamphlets, studies reports, patents, norms, thesis/dissertations, brochures, movies, CD / DVDs and other materials that serve their users ' data needs within a restricted time.

INFORMATION TECHNOLOGY

Information technology is related to computer networks, knowledge networks, telephone and fax systems, video applications, Internet and email systems, web conferencing, video conferencing, satellite technology, radio and wireless broadcasting, etc. Furthermore, at present, the Geological Information System / Remote Sensing (GIS / RS) have also become significant IT research fields. Computers are used to process and store information, while telecommunications technology provides communication instruments that enable users to access databases and connect other computer network works at various places.

In special libraries, the use of information technology has become even more essential. At an accelerated rate, special libraries switch to IT-based resources and services. The traditional resources of special libraries are rapidly replacing e-journals, CD-ROM databases, internet databases, e-books, web-based resources and a range of other electronic resources. Merely speaking, IT can be described as a basket of techniques that help or support storage, data information processing, or data information dissemination/communication, or both.

IMPACT OF INFORMATION TECHNOLOGY

The world has been transformed by the information technologies into a global village and is increasingly dependent on creative management and distribution of information. Recently, the world has seen significant changes that are increasingly crucial for the need to acquire, use and share knowledge. In the twenty-first century, the time of understanding and information seeking now takes the leading role in all sectors. The word bank has used the metaphor “knowledge is development”. Underdevelopment is mainly liable for lack of understanding. A creative brand becomes economic leaders in our knowledge and information-oriented society, and

dedicated knowledge-based staffs are in high demand. Technology progress has produced a tremendous improvement that has affected nearly all walks of life. In particular, in all corners of the global arena, the magnetic term information technology has been chanted and integrated into organisational, managerial, developmental and other industries. The services that are made using IT are quicker and more efficient.

IMPACT OF IT ON LIBRARIES

The effect of technology has already been profoundly felt on libraries. Access to machinery for word processing and teleconferencing is quite common. Budgeting, forecasting, and planning software packages are easily accessible. The hard library management choices are which products and services to select and whether to purchase or lease equipment. Libraries that were deemed to be data shops have only a fresh perspective in the age of contemporary information technology. Information technology (IT) based services are more productive, the activities that have been carried out manually in libraries with so much pain and strain are carried out smoothly.

COLLECTION DEVELOPMENT

The growth of the collection is the most significant method in the library. For reader perspective and fulfilment, in which library reading materials are improved. The library collection is a total of library products such as books, manuscripts, series, pamphlets, reports, recordings, microfilms, libraries, and internet resources (print and non-print materials) that make up a library holding. Establishing library collection is the method of constructing library equipment to satisfy the information requirements of customers in a timely and cost-effective way, using local data resources and other organisations.

IT INFRASTRUCTURE

As we understand the IT infrastructure, the hardware is the set of a computer's physical parts, while the software is how the computer system functions overall in order to conduct a particular task. The various kinds of hardware and software equipment such as operating system, digitisation equipment, and networking software show the quality and efficiency of the technology used by university libraries.

NETWORK AND WEBSITES/PORTALS

Currently sharing resources becomes more and more critical, so libraries ' interdependence with each other becomes very important. In addition to maintaining records of stocks and users, the use of IT in libraries has been of excellent help in the purchase, cataloguing, and serials control. A library network is created when a group of libraries decide to exchange understanding and data. A recent development in the network user population has brought more non-technical individuals into the arena who have understood the benefits of specific network and website apps, such as electronic mails, library networks and websites, data centres, marketing networks, and who want to experience the growing accessibility of network-based data resources. Information may be accessible now sometimes more quickly in electronic form than in written material forms.

IT BASED APPLICATIONS/ SERVICES

Information technology implies a range of technological applications in the data communication system. IT is helpful to accommodate enhanced job pressure, achieve higher effectiveness, generate new services, and assist in cooperative operations. The implementation and use of information technology (IT) certainly help to improve library and data services ' quality and efficiency. In almost all fields of human activity, information technology is implemented. IT application areas usually involve libraries, medical science, trade, science, education, agriculture, fields of research and innovation. IT-based apps are used in libraries for certain tasks in libraries, such as computer technology, library management, database creation and growth, technologies, library and data networking, classification, cataloguing, CAS / SDI services, reference services, library resource sharing, CD / floppies / DVD storage services, technical processing and writing, audio /video/ microfilms, serial control etc.

LIBRARY SERVICES/DATABASES

An organised set of data that is stored on a computer and can be automatically searched called the database. It includes useful raw data such as physical-chemical properties, statistical, numerical, or bibliographic information that includes descriptions of source papers on non-bibliographic information related to universities

or organisations, projects, experts, etc. A database relates to machine-readable or bibliographic documents, but a shared collection of structured information managed by a set of unique software can be used in a precise way. A database is intended to prevent data duplication and to allow information to be retrieved to meet a broad range of user information requirements. Databases are the media that has changed the way information is perceived and disseminated. Databases assist in accessing any information remotely. Databases are used for multiple data processing operations, such as exchanging resources, reference services, abstracting and indexing services, simple retrieval of any data. The databases are also affecting the following library services.

- The online catalogue has a significant impact on the delivery of the document.
- Another importance of the online catalogue is its availability as platforms for other online services.

Databases are classified as bibliographic as well as agricultural databases in the current research.

STATEMENT OF THE PROBLEM

The study is focused on the status of information technology in the agricultural university libraries of Uttar Pradesh. The problem undertaken for the study is entitled as **"IMPACT OF INFORMATION TECHNOLOGY ON THE AGRICULTURAL UNIVERSITY LIBRARIES IN UTTAR PRADESH: A STUDY"**.

OBJECTIVES OF THE STUDY

The objectives of the present study are as follows: -

- To find out the status of e-resources available in the SAU libraries of U.P.;
- To find out the awareness of Information Technology among the library staff;
- To evaluate the budget for print and non-print resources;
- To find out the status of IT services provided by the library;

- To identify the awareness of e-resources among the users;
- To identify the types of issues that users face while using IT products and services in the libraries;
- To find out the user satisfaction with the use of IT.

SIGNIFICANCE OF THE STUDY

The significance of the study is to determine how information technology is used in the libraries of agricultural universities. The present research focuses on the agricultural university libraries of Uttar Pradesh. Focusing on the increasing amount of libraries and implementing information technology in libraries is needed to provide customers with excellent library facilities, comprehend the customer satisfaction level, and preserve the standard of agricultural university libraries. The study defined current technology and knowledge. It helps recognize the range of library services and facilities used in these libraries and their diversity.

HYPOTHESES OF THE STUDY

The Hypotheses of this study are as under: -

1. Most of the agricultural university libraries are facing budget crises for subscribing electronic resources;
2. the users of the agricultural libraries are satisfied with the IT-based services provided to them;
3. There is a lack of training opportunities provided to the library staff;
4. The users are not aware of the IT facilities provided by the library

SCOPE OF THE STUDY

There are six agricultural universities in Uttar Pradesh, out of which data was retrieved from five libraries which are as follows-

S .No.	UNIVERSITY NAME	PLACE	YEAR OF ESTABLISHMENT
1.	Sam Higginbottom University of Agriculture, Technology & Sciences	Allahabad	1910
2.	Narendra Deva University of Agriculture & Technology	Faizabad	1974
3.	Chandra Shekhar Azad University of Agriculture & Technology	Kanpur	1975
4.	Sardar Vallabhbhai Patel University of Agriculture & Technology	Meerut	2000
5.	Banda University of Agriculture and Technology	Banda	2010

FINDINGS

The major findings of the study are given below:

- The result shows that the mostly 60% libraries are working manually and 40% libraries are partially automated.
- The result indicates that the most of 80% libraries require IT application-based training for providing services to its users.
- The study reveals that the allotment of the budget is not sufficient for implementing IT in the agricultural university libraries.
- The result shoes that the total number of library staffs (professional + non-professional) is highest in SHUAT'S university library i.e. 32, followed by 18 staff in CSAUK university library. Whereas the number of staff is very less for the rest of the university libraries.
- The study shows that the total number of users is highest in SHUAT'S library i.e. 6650, followed by CSAUK with 3260 number of users, NDUAT has 2330 number of users, SVPUAT has 1294 number of users and BUAT has least number of users i.e. 819.

- The study reveals that NDUAT has comparatively a rich collection in its library with 78032 numbers of total collections. CSAUK and SHUATS have 74864 and 50270 number of collections respectively in their libraries. With BUAT having least number of collections i.e. 6735.
- The study shows that the total number of electronic resources is highest in SHUATS university library i.e. 11554, followed by CSAUK library with 6031 number of resources. Whereas, the rest of the libraries have very less number of resources including BUAT, SVPUAT and NDUAT libraries.
- The study reveals that SHUATS's library has various types of infrastructures such as desktops, printers, digitization equipment network, servers, video conferencing, Wi-Fi and internet. NDUAT library has infrastructures including desktops, printers, digitization equipment, network, CD-Server network, web servers and internet. CSAUK library has infrastructures like desktops, printers, digitization equipment, network, servers, CD-Server network, and web servers, Wi-Fi and internet. SVPUAT library has infrastructures like digitization equipment, network, servers, CD-Server network, Wi-Fi, and internet. BUAT library has infrastructures like desktops, printers, network, web server, UPS, Wi-Fi, and internet.
- The study reveals that the digitization software facilities are available in the SHUATS library such as CD-Writer, OCR, scanners etc., e-book reader software, digital library software and Koha software has use in the library. NDUAT has the e-book reader software, and Koha software facilities in the library. CSAUK has digitization software (CD-Writer, OCR, Scanners etc.) and digital library software in its library. Whereas, SVPUAT and BUAT libraries have no digitization software facilities available in their library.
- The study reveals that SHUATS library has subscribed five online databases like AGRIS (International), CABI Abstracts (International), SCIENCE DIRECT (India), EBSCO (India), CeRA (ICAR, India) and one offline database AGRICOLA (International). NDUAT library has subscribed only one online database i.e. CeRA (ICAR, India) and three offline databases AGRIS (International), CABI Abstracts (International) and AGRICOLA (International). CSAUK library has subscribed only one online database i.e. CeRA (ICAR, India). SVPUAT library has subscribed one online database CeRa (ICAR, India)

and two offline databases CABI Abstracts (International) and AGRICOLA (International). BUAT library has subscribed no databases services.

- The result indicates that most of the respondents are visiting the library daily, where 72% of library visitors have been recorded in the SVPUAT Library.
- The result shows that the maximum no. of users 61.44% use IT based services for the purpose of updating knowledge in the NDUAT Library.
- The study shows that the maximum no. of user 26.66% is aware of e-books in the CSAUK Library.
- The study reveals that the Maximum users who faced problems due to lack of software knowledge are 15.98%, 14.03% faced lack of hardware knowledge, 13.09% faced lack of time, 15.64% faced lack of training, and 14.28% faced a lack of information, 15.13% faced a lack of trained staff in the library and 11.81% faced lack of patience to sit & work on computer.
- Maximum no. of users 27.10% used information services in the CSAUK Library.
- Most of the 84.02% users require training for accessing IT based products provided by the library.
- The study reveals that 39.60% users are not satisfied with IT based services, 33.74% users are partly satisfied with IT based services, 9.29% users are uncertain and only 17.35 % users are satisfied with IT based services provided by libraries.
- The e-resources and online database services provided by the library are sufficient according to maximum no. of users 38.79% in the library of BUAT.
- The study shows that 18.66% faced shortage of computer, 15.47% faced lack of awareness about IT services/products, 15.10% faced slow speed of internet, 13.88% faced lack of computer knowledge, 13.32% faced availability of needed information, 11.91% faced lack of orientation in using IT, and 11.63% faced lack of support from staff.
- The study reveals that the users of these agricultural university libraries require comprehensive IT based agricultural information systems to be provided by their respective libraries that may work at the national level. The finding shows that 87.06% of the users are highly in need of this IT based service at a national level.

CONCLUSION

The present study aims at displaying the status of information technology in the agricultural university libraries of Uttar Pradesh. Information technology plays a vital role in the functioning of the libraries. It has become a greater challenge to overcome this barrier, in order to provide an updated service to its users. Only when a library achieves the satisfaction of its user, it is considered as prosperous. It is therefore essential for library staff to embrace with open hands the improvements in the technology and provide better service to its users. In view of the findings of the study it is clear that agricultural universities in Uttar Pradesh are striving for making services better for their users with the help of technologies. The libraries of these universities need to make use of advance technologies to improve their status.

The present work was performed keeping in mind the major objectives of the study. The objectives were formulated and have been achieved with the help of data collected from different agricultural university libraries. The data collected from the users and librarians of the respective university libraries was analyzed with the help of tables and graphs. The condition of all the libraries was observed and it has been found that not all the libraries are well developed. Very few amounts of computers are available for the users of all the libraries. The libraries lack well qualified and trained staffs. The insufficient availability of electronic resources, databases, and IT based infrastructure should be overcome. Despite of all odds, the staffs and users of these libraries are satisfied with their libraries.