

Awareness and Use of ICT-Based Library and Information Services among the Agricultural Science Students of Uttar Banga Krishi Viswavidyalaya, West Bengal: A Case Study

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Abstract

The aim of the present study is to explore the awareness and use of ICT-based library and information services among the agricultural science students of Uttar Banga Krishi Viswavidyalaya (UBKV), Pundibari, Cooch Behar (West Bengal), India. An online questionnaire-based survey has been carried out to collect the data from the students of Uttar Banga Krishi Viswavidyalaya (UBKV), Pundibari, Cooch Behar of the state of West Bengal, India. The online questionnaire was shared among 200 respondents, of whom 159 have responded, which gives a response rate of 79.50%. The findings show that all the respondents were aware of and using the Online Public Access Catalogue (OPAC)/Web-OPAC services. Around 91.82 per cent of the respondents were aware of the use of e-journals and 86.80 per cent were aware of the use of e-books for their academic and research purposes. About 76.73 per cent of the respondents were aware of the use of the Consortium for Electronic Resources in Agriculture (CeRA), Krishikosh repository, Agricat union catalogue, and so on, and the e-resources packages and related services. The findings also reveal some of the problems encountered by the respondents. On the basis of the feedback from the respondents, some valuable suggestions have also been given by the researchers.

Keywords: Users' Awareness, ICT-Based Services, Agricultural Universities, E-Resources, Library Services, Usage Analysis

Introduction

The convergence of computers and communication technologies has opened up a vast arena of the Internet and Intranet. One cannot ignore the silent revolution taking place in the communication systems, particularly in providing library resources and services. In the present era of knowledge revolution, capturing, preserving, and reusing of knowledge has become absolutely essential for any organisation to keep itself competitive and efficient. Information and Communication Technologies (ICT) has played a vital role in organising, storing, preserving, and reusing the resources and services of any library and information centre. Academic as well as agricultural libraries have played an important role in providing academic and research related materials to their member users. Due to the impact of ICT, the way of collection, organisation and services of academic as well as agricultural libraries has totally changed. "The introduction of ICT in the field of libraries and information centres has brought a sea change in the techniques of access, storage, retrieval and dissemination of information resources that a library acquired to serve its users. It has also changed the ways of providing services offered to user's community. The development and application of ICT in library and information centre has made library

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professionals easier to design and develop different services to make users aware and use the available library resources. Application of IT in library and information centres thus helping both library professionals and users to access and to locate library resources easily without wastage of time and energy” (Gohain et al., 2014).

The ICT actually is a broad term, which includes computers, network hardware and software, satellite systems, any communication device or application, and other associated devices and applications. The speedy development has changed the informational demands of users as well. Now, users want their desired information and resources quickly and in an easy format. Therefore, due to tremendous growth in ICT applications, libraries or knowledge resource centres have also been trying to acquire ICT-based resources and services to satisfy the varied information needs of their user community, as well as for their survival purpose.

Similarly, in this digital era, the libraries of agricultural universities and institutions are facing ICT-based challenges and have to force to transform their information resources, services, and infrastructure according to the changing needs of the agricultural science students, teachers, scientists, extension specialists, and progressive farmers’ community. In view of the above discussed facts and the high influence of ICT in every walk of human life as well as agricultural stakeholders, a study was planned to know the awareness and use of ICT-based library and information services among the agricultural science students of Uttar Banga Krishi Viswavidyalaya (UBKV), Pundibari, Cooch Behar (West Bengal), India.

Literature Review

To understand the concept and state of awareness and use of ICT-based services among the various categories of users, an extensive review of existing literature has been conducted, which is briefly provided below.

Jindal et al. (2020) conducted a comparative study to know the user awareness of ICT-enabled information services and revealed that more than 84 per cent of the users were aware of the ICT-enabled information services, while about 61 per cent of the users found ICT-enabled services useful to them in accessing the university library resources. In his study, Panda (2021)

described how libraries and information centres are increasingly using ICT and second-generation Web-based technologies (Web 2.0) such as social media and networking sites for activities such as providing online-based library services, open policy making, budget allocation, user study, demand-driven acquisition, and marketing of library services and information products. On the other hand, Arora and Sharma (2016) carried out a study on acceptance of ICT-based information resources among library users of MNIT Jaipur and observed that most users were aware of library resources and were also using it routinely; however, they suggested that the library needs to employ awareness programmes for effective and optimum use of existing resources and services. “A study was conducted to know the use of ICT-based library resources and services and its impact on users at the University of Allahabad and revealed that most of the users were aware of OPAC services, and were also satisfied with the services of the library professionals and with the availability of enough e-resources facility in the library, whereas, most of the respondents feels that the use of ICT played a significant role in their studies”. “To explore the awareness and use of IT-based library and information services among the B.Tech. students of the School of Engineering of Tezpur University, Assam, Gohain et al. (2014) revealed that about 50 per cent of the respondents were not aware about the on line reference/information service, and respondents were also not aware about the online renewals and online reservation of books service; however, respondents were very much satisfied with automated circulation service, OPAC/Web-OPAC service, InfoGranth, Infoj, e-News, reprographic services, library webpage service, etc.”. Dhanavandan et al. (2012) conducted a study on access and awareness of ICT resources and services in medical college libraries in Puducherry and found that “a maximum number of respondents learned the use of electronic resources through external course and guidance from others as well, and the respondents were using Google to access the information in the Internet”; however, too much information retrieved from the Internet was the main barrier to accessing electronic resources. A study was conducted on “use of information communication technology based services by faculty members and students of one premier engineering college of Odisha”. Satpathy et al. (2012) found that most of the faculty members and P.G. students of C.V. Raman College of Engineering, Bhubaneswar, possess excellent

knowledge on ICT-based services as per their own assessment, while most of the respondents were also using various ICT-based services on a daily basis, because they feel that ICT-based information resources are beneficial for teaching and learning process. Zabed Ahmed (2014) investigated “the use of IT-based information services in public university libraries of Bangladesh and found that there are insufficiency in library resources, automation practices, access to online resources and IT facilities in the universities, while the use of computer and network technologies in older universities was reasonably high as compared to newer universities, which are lagging far behind in the latest technology applications”. A study on the use of ICT-based resources and services in special libraries in Kerala was conducted by Mohamed (2007) and the researcher revealed that the ICT-based resources used by the largest percentage of users was the e-mail, followed by the WWW, which was being used by nearly 60 per cent of the library users. However, a good number of the users were not satisfied with the application of ICT in their libraries and indicated ‘inadequate ICT infrastructure’ was the main reason for their dissatisfaction.

A good number of studies on awareness and use of ICT-based library services have been conducted in the past in various institutions in India and abroad; however, the researchers were not able to find any study which was conducted on agricultural research institutions particularly from the eastern part of India. The present study was therefore planned to fill this gap and tried to explore the interesting findings, which will be beneficial for the studied institution, as well as for those researchers who wanted to conduct similar types of studies in the future.

Uttar Banga Krishi Viswavidyalaya, Pundibari, Cooch Behar (W.B.) – A Brief Sketch

“The State Government of West Bengal initially established an off campus of the Bidhan Chandra Krishi Viswavidyalaya at Pundibari in Cooch Behar district in 1979 to cater to the need of peoples of the northern part of West Bengal and imparting higher education in emerging areas of modern agricultural sciences and technology, which comprises eight districts. Later on, the Government

of West Bengal upgraded the North Bengal Campus into full-fledged Agricultural University by the name of Uttar Banga Krishi Viswavidyalaya in 2001 by the West Bengal Act XX of 2000” (UBKV, 2021).

Statement of the Problem

Information Communication Technology (ICT) has a wide impact on the agricultural information system; it has also changed the complete trend of seeking information and resources, and its usage. Accordingly, the agricultural science students, as well as the agricultural research fraternity now want computer-based digital information resources, which are available to them 24x7x365, as per their convenience, without any constraints. Therefore, the current study endeavours to explore the awareness of the use of ICT-based library and information services among the agricultural students of Uttar Banga Krishi Viswavidyalaya (UBKV), Pundibari, Cooch Behar (West Bengal), which is an esteemed agricultural university in West Bengal, India.

Objectives of the Study

The main objective of the present study is to explore the awareness and use of ICT-based library and information services among the agricultural science students of Uttar Banga Krishi Viswavidyalaya, West Bengal. The specific objectives of the study include:

- To find out the awareness of ICT-based library and information services among the agricultural science students of UBKV.
- To explore the use of existing ICT-based library services.
- To discover the preferred electronic resources to access the desired information.
- To analyse the user’s satisfaction with information resources and services.
- To identify the problems faced by the agricultural science students while accessing ICT-based library and information services.
- To provide suggestions for the improvement of awareness and use of ICT-based library and information services.

Scope and Limitation of the Study

The scope of the present study was limited to understanding the awareness and use of information and communication technology-based library and information services among the agricultural science students of Uttar Banga Krishi Viswavidyalaya (UBKV), Pundibari, Cooch Behar (West Bengal). Only the undergraduate and postgraduate students in their final year were covered in this study.

Significance of the Study

This study is about discovering the awareness and use of information and communication technology-based library and information resources and services among the agricultural science students of Uttar Banga Krishi Viswavidyalaya (UBKV), Pundibari, Cooch Behar (West Bengal). As we are all aware, this is the era of the Internet and digital information resources. Due to lack of time and the need of the day, everyone wants their desired information in a digital form, which can be accessed as and when they desire. The findings of the current study would be helpful in recognising the information use habits, as well as the problems faced by the respondents during the use of the library and its resources. The finding would also be helpful for the library authorities of the university, to upgrade the ICT infrastructure in the library, as well as improve the service delivery pattern, so that utmost users' satisfaction could be achieved. Apart from this, researchers from other parts of the West Bengal state, as well as India, may carry out similar types of studies to investigate the awareness and use of ICT-based library services, which can be helpful to improve the library service quality.

Research Methodology

The present study was carried out among the agricultural science students of the Uttar Banga Krishi Viswavidyalaya, Pundibari, Cooch Behar, West Bengal (India) in April-May 2021. For the study, online survey design was used. In the Indian scenario, the students who particularly belong to rural areas and farmers' families mostly join the agricultural sciences courses. Furthermore, it is generally

believed that rural students are not much familiar with the use of ICT tools and applications; therefore, the population of 200 undergraduate and postgraduate students of agricultural science disciplines was selected randomly as the sample for the current study. An online structured questionnaire was used as an instrument for data collection. The questionnaire was prepared on Google Forms and 200 copies of the questionnaire were distributed online among the respondents through e-mail. Out of 200 questionnaires, 159 responses were received. Thus, 79.50% response rate was achieved in the study. The collected descriptive data are reported in the form of percentages.

Data Analysis and Interpretation

The collected data are analysed in the form of tables under the following headings:

Table 1: Distribution of Respondents

<i>Academic Status of Respondents</i>	<i>No. of Respondents</i>	<i>Percentage</i>
Post-graduate	68	42.76
Graduate	91	57.24
Total	159	100

Table 1 shows the distribution of the respondents based on their categories/degrees. As the data shows, 42.76 per cent post-graduate and 57.24 per cent undergraduate students participated in the study. The respondents were included from all the agricultural sciences departments, such as agriculture, horticulture, and forestry disciplines.

Table 2: Gender-Wise Distribution of Respondents

<i>Gender</i>	<i>No. of Respondents</i>	<i>Percentage</i>
Male	97	61.00
Female	62	39.00
Total	159	100

Table 2 highlights the gender-wise distribution of respondents who participated in the survey study. It is clear from the data given that out of 159 respondents, 61 per cent were male and 39 per cent were female.

Table 3: Awareness about Electronic Resources

<i>Awareness about E-Resources</i>	<i>No. of Respondents</i>	<i>Percentage</i>
Fully aware	65	40.88
Aware	82	51.58
Somewhat aware	12	07.54
Not aware	00	00
Total	159	100

The data given in Table 3 depicted the level of awareness about the e-resources among the agricultural science students of Uttar Banga Krishi Viswavidyalaya (UBKV), Pundibari, Cooch Behar (West Bengal). It is revealed that 51.58 per cent of the respondents were aware of the use of electronic information resources, whereas 40.88 per cent were fully aware, and only 7.54 per cent were somewhat aware about the use of electronic information resources. The analysis shows that more than 90 per cent of the respondents were aware of the electronic information resources and were using them in their academic and research work.

Table 4: Awareness and Use of ICT-Based Library and Information Resources

<i>Awareness of ICT-Based LIS Services*</i>	<i>No. of Respondents</i>	<i>Percentage</i>
OPAC/Web-OPAC	159	100
E-books	138	86.80
E-journals	146	91.82
Automated circulation service	129	81.13
Online renewal of borrowed books service	42	26.42
Online reservation of books service	53	33.33
Access to e-contents through digital library portal	85	53.46
E-mail alert service for overdue books	66	41.50
Mobile-based library services	58	36.48
Reprographic service	118	74.21
CeRA, Krishikosh, Agricat, and so on, resources awareness	122	76.73

*Multiple answers were permitted.

Table 4 highlights the awareness and use of various Information and Communication Technology (ICT)-based library and information services offered by the library of Uttar Banga Krishi Viswavidyalaya (UBKV), Pundibari, Cooch Behar (West Bengal). It is clearly noticed from the data given in Table 4 that all respondents were aware of and using the Online Public Access Catalogue (OPAC)/ Web-OPAC service offered by the UBKV library, while 91.82 per cent of the respondents replied that they were aware of the use of e-journals and regularly accessing the contents for their academic as well as research work. On the other hand, 86.80 per cent were also aware of e-books and using them for academic and research purposes, whereas 81.13 per cent were aware of and gained the benefit of the automated circulation service. Similarly, 76.73 per cent were aware of the Consortium for Electronic Resources in Agriculture (CeRA), Krishikosh repository, Agricat union catalogue, and so on, and the e-resources packages, whereas 74.21 per cent were aware of the reprographic service and also using the same. Around 53.46 per cent were aware of how to access the electronic content through the digital library portal, while 41.50 per cent of the respondents were aware of the e-mail alert service for overdue books, followed by mobile-based library services (36.48 per cent), online reservation of books service (33.33 per cent), and online renewal of borrowed books service (26.42 per cent), respectively. This analysis shows that most of the respondents were aware of the ICT-based library and information services and were using them in their academic and research work.

Table 5: Preferred Electronic Resources to Access Desired Information

<i>Preferred Electronic Resources</i>	<i>No. of Respondents</i>	<i>Percentage</i>
E-books	20	12.58
E-journals	52	32.70
E-databases	26	16.36
E-theses and dissertations	41	25.79
E-magazines and e-newspapers	13	08.17
E-reports and so on	07	04.40
Total	159	100

The presented data in Table 5 shows the preferred electronic information resources accessed by the

respondents for their desired academic and research work. It was noticed during the study that 32.70 per cent of the respondents preferred to use e-journals to access the desired information, whereas 25.79 per cent preferred to use electronic theses and dissertations, especially for their research work. On the other hand, 16.36 per cent preferred to access electronic databases for their desired academic and research related information, followed by e-books (12.58 per cent), e-magazines and e-newspapers (8.17 per cent), and e-reports and so on (4.40 per cent), respectively. The analysis shows that about 60 percent of the respondents preferred e-journals and e-theses and dissertations as the electronic information resource to get the desired information.

Table 6: Satisfaction Level about using ICT-Based Library Services

<i>Satisfaction Level</i>	<i>No. of Respondents</i>	<i>Percentage</i>
Highly satisfied	34	21.38
Satisfied	65	40.88
Somewhat satisfied	49	30.82
Not satisfied	11	06.92
Total	159	100

Table 6 depicted the satisfaction level among the respondents about using ICT-based library and information services. It is clearly noticed from Table 6 that 40.88 per cent of the respondents were satisfied with the ICT-based library and information services offered by the library of UBKV, whereas 30.82 per cent replied that they are somewhat satisfied. On the other hand, 21.38 per cent replied that they are highly satisfied and 6.92 per cent were not satisfied with the ICT-based library and information services. The analysis shows that more than 60 per cent of the respondents were satisfied with the ICT-based library and information services offered by the library of UBKV.

Table 7: Problems Faced while using ICT-Based Library Services and Suggestions Thereof

<i>Problems Faced*</i>	<i>No. of Respondents</i>	<i>Percentage</i>
Lack of proper knowledge about using ICT tools	51	32.07
Lack of awareness about the ICT-based library services	66	41.50

<i>Problems Faced*</i>	<i>No. of Respondents</i>	<i>Percentage</i>
Lack of training programmes on use of ICT-based library services	77	48.42
Poor Internet connectivity	38	23.90
Lack of ICT infrastructure in the library	70	44.02
Lack of infrastructural facilities	58	36.48
Dissatisfaction with library staff's knowledge and behaviour	27	16.98
Lack of time due to busy class and field schedules	43	27.04
Lack of desired e-resources	30	18.86

*Multiple answers were permitted.

The data given in Table 7 reported the various problems faced by the respondents while using ICT-based library and information services, and also listed the suggestions by the respondents against each noted problem faced. It was observed during the study that 48.42 per cent of the respondents reported the problem of lack of training programmes on the use of ICT-based library and information services, while 44.02 per cent reported the problem of lack of ICT infrastructure in the library. On the other hand, 41.50 per cent of the respondents reported that they are facing lack of awareness about the use of ICT-based library and information services, whereas 36.48 per cent reported the lack of proper basic infrastructural facilities in the library premises. Similarly, 32.07 per cent were facing the problem of lack of proper knowledge about using ICT tools, followed by lack of time due to busy class and field schedules (27.04 per cent), poor Internet connectivity (23.90 per cent), lack of desired e-resources (18.86 per cent), and the problem of dissatisfaction with the library staff's knowledge and behaviour (16.98 per cent), respectively.

Summary of Findings

Based on data analysis, some of the major finding may be summarised as follows:

- More than 90 per cent of the respondents were aware of the electronic information resources and were using them in their academic and research work.

- All the respondents were aware of and using the Online Public Access Catalogue (OPAC)/Web-OPAC services offered by the UBKV library.
 - Around 91.82 per cent of the respondents were aware of the e-journals and 86.80 per cent of the respondents were also aware of the e-books, and using them for their academic and research purpose.
 - Around 76.73 per cent of the respondents were aware of the Consortium for Electronic Resources in Agriculture (CeRA), Krishikosh repository, Agricut union catalogue, and so on, and the e-resources packages and related services offered by the UBKV library; they were using them for their academic and research related work.
 - The e-journals, and e-theses and dissertations were the preferred electronic information resources to obtain the desired information for about 60 per cent of the respondents.
 - Around 40.88 per cent of the respondents were satisfied with the ICT-based library and information services offered by the library of UBKV, whereas 21.38 per cent were highly satisfied.
 - About 48.42 per cent of the respondents faced the problem of lack of training programmes on the use of ICT-based library and information services, while 44.02 per cent faced the problem of lack of ICT infrastructure in the library.
- It has also been noticed during the study that some of the respondents reported the lack of e-resources and poor Internet connectivity; hence, it can also be suggested that a sufficient number of e-resources must be enhanced and proper Internet connectivity, especially high-speed bandwidth, must be provided by the central library of UBKV, for the satisfaction of the users.
 - It has also come out during the study that some of the respondents were not happy with the attitude and knowledge of the library staff when searching for their desired information and using other services offered by the library. Therefore, it is suggested that the skills and behaviour of the library staff of UBKV should be improved, so that they may positively help the users facing problems in searching for their desired information and wanting to use other basic services offered by the library of UBKV. The authorities must have made proper provisions for the library professional and non-professional staffs to involve themselves in personal and professional training programmes on various levels, so that they may enhance their skills and the users may feel satisfied about the behaviour and knowledge of the library staff.

Suggestions and Recommendations

Based on the responses of the respondents received during the study, the following suggestions could be made:

- It has come out during the study that some of the respondents were facing the problem of lack of knowledge in using ICT tools, as well as ICT-based library and information services; hence, it is suggested that the central library of UBKV, Pundibari, Cooch Behar (W.B.) should organise training programmes on awareness and use of ICT tools and library and information resources on a regular basis.
- More than 40 per cent of the respondents reported the problem of lack of ICT and basic infrastructural facilities in the library. Therefore, it is suggested that these facilities should be enhanced to the user's satisfaction.

Conclusion

Information services and the way of offering services have totally changed, due to the worldwide effect of Information and Communication Technology (ICT). Similarly, the informational needs of users have also changed. Due to the widespread effect of ICT, agricultural library and information services have also changed. Now, agricultural science students and the research fraternity want quick information services at their door-step. Agricultural library and information services have now totally changed due to the widespread effect of ICT; hence, it is the need of the era that every library should change its information delivery and services pattern. More and more electronic information resources have to be included in the library collection, and ICT infrastructural facilities must be enhanced, so that the library and information services offered could be up to the optimum level of satisfaction of the users. From the result of the study, it is found that most of the respondents are aware of the ICT-based library services; however, there is need for

some improvement in the various aspects of services in the library, such as basic ICT infrastructural facilities, ICT-based information resources and services, basic library infrastructural facilities, high-speed uninterrupted Internet connectivity with sufficient terminals, and so on. Apart from this, the authorities of Uttar Banga Krishi Viswavidyalaya, Pundibari, Cooch Behar (West Bengal) must motivate the library staff for better output, and must support the staff in frequently conducting and joining awareness and training programmes on various levels.

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