Abstract

This paper aims to study the awareness & use of e-resources at the G.B. Pant University of Agriculture & Technology, (AGRIVERSITY) Pantnagar, India. The study targeted faculty and students of four constituent colleges of the university. A structured questionnaire was prepared and distributed among the members of target population. Random sampling approach was followed for sampling the population. The data collected was based on 733 duly filled in valid questionnaires returned by the respondents. Awareness of users for e-resources was high for both the category of users (i.e., faculty and students). The findings revealed that of the library services, photocopying and May I Help You Services were least used. Print journals service was greater used by students than faculty. More than 50% of respondents indicated the lack of training and external courses for updating their knowledge on use of e-resources. The level of awareness was high for e-journals among faculty than in students. Of the e-resources, e-journals, online databases, and audio-video lectures were often used. Teaching/learning and writing assignments were identified as main purposes of using e-resources. Finally based on the outcomes of findings recommendations have been provided. This type of study has been made for the first time in G.B. Pant University of Agriculture & Technology, Pantnagar, India. The finding could be used to improve the awareness and use of e-resources among the faculty and students of Agriculture, Veterinary, Technology, and Basic Sciences colleges of other agricultural universities.
1. INTRODUCTION

Developments in information and communication technologies have enabled users to access and use e-resources that exist in various electronic forms viz. CD-ROM database, online databases, e-books, e-journals, and other computer-based electronic resources. Now the e-resources have become very important and are widely used by researchers, faculty members and students in addition to print resources. Faculty members use them to prepare teaching materials; researchers, faculty members as well as students use e-resources to acquire information for research use; students use them for preparation of assignments and also used for the learning process to enrich knowledge (Ahmad, 2013). Equally important is awareness about the e-resources and their access and efficient use for the intended purpose. Awareness of the changes in technology in recent years has dramatically impacted how information is accessed, stored and disseminated (Tsakomas and Papatheodorou, 2006).

Though several studies have been done on awareness, access, and use of e-resources in respect of other Universities/Institutions but there appears near absence of scientific information on this aspect in respect of Agricultural Universities. Therefore, an attempt has been made to study the level of awareness, access and use of e-resources by faculty and students of India’s first Agricultural University- Govind Ballabh Pant University of Agriculture & Technology, (Agriversity) Pantnagar, (Uttarakhand), India.

1.1 About GBPUA&T., Pantnagar

Govind Ballabh Pant University of Agriculture and Technology, Pantnagar (erstwhile Uttar Pradesh Agricultural University) was dedicated to the Nation by the first Prime Minister of India Pt Jawaharlal Nehru on 17 November 1960. The G.B. Pant University is a symbol of the successful partnership between India and the United States. The establishment of this university brought about a revolution in agricultural education, research, and extension. It paved the way for setting up of other agricultural universities in the country.

The main campus lies in Udham Singh Nagar district of Uttarakhand at 29 N latitude and 79 E longitudes at an elevation of 243.8 m above the mean sea level. The University campus at Pantnagar is spread in an area of 10,016.29-acre (40.5345 km$^2$) which makes it the second largest university in the world, in terms of the adjacent area. Pantnagar is a purely residential university and comprises an independent township in itself. This main campus has the area responsibility for the entire Uttarakhand representing plains, Tarai, Bhabar and hill areas. There are 763 teachers and officers, 59 technical staff, 631 administrative and ministerial personnel and 1425 class-III employees, amounting to a total strength of 2878. The number of students in the University ranges between 4200-4400. Thus, the teacher taught ratio is about 1:6.

1.2 University Library

The university has a central library besides small libraries being maintained in respective departments of different colleges. The central library was established in the year 1960, since then it continues to make progress in its programme to face the challenges of
information explosion by adopting information technology. The University Library of G. B. Pant University of Agriculture & Technology is providing quality services to the students, teachers & research scholars, supporting teaching, research and extension programmes of the university. University Library has a highly specialized collection of 3.9 Lakh documents in the field of Agriculture, Veterinary Sciences, Animal Husbandry, Home Science, Fisheries, Basic Sciences, Humanities, Technology & other allied subjects. The collection includes Books, Theses, Periodicals, Reprints, Maps, Top sheets, Globes, Microfilms, Microfiches, Records, Tapes, CD-ROMs, etc.

1.3 The Colleges at GBPUA&T., Pantnagar

Presently there are seven colleges in the university viz., College of Agriculture (COA), College of Veterinary and Animal Sciences (CVAS), College of Home Science, College of Technology (COT), College of Fisheries, College of Basic Sciences & Humanities (CBSH), and College of Agri-business Management. Four colleges namely COA, CVAS, COT and CBSH that are relatively older than others in terms of the establishment were targeted for the present study.

2. OBJECTIVES

The study aimed to investigate the following:

- To study different types of e-resources and services available in the university library.
- To determine the level of awareness of available e-resources.
- To assess the purpose and usage of e-resources.

3. SCOPE AND LIMITATION

The present study focuses on awareness, access and use of e-resources by faculty and students encompassing four of the seven constituent colleges viz., COA, CVAS, COT and CBSH of G.B. Pant University of Agriculture & Technology Pantnagar of Uttarakhand, India. These colleges were established with the inception of the university in 1960. College of Technology came into being in 1966. It is an offshoot of College of Agricultural Engineering established in 1960. Majority of the users of e-resources in the university are from these colleges. The scope of study is limited to the e-resources mainly available in university library.

4. REVIEW OF LITERATURE

Several studies have been carried out on the awareness and use of e-resources by faculty and students in India and abroad. The literature on the awareness, perception, and use of e-resources was surveyed, which facilitated the making of the questionnaire. Current trends in collection development in university libraries are no longer restricted to traditional print resources. Deliberate efforts made by libraries to acquire electronic information resources to meet the information needs of their users has led to tremendous increase in, the amount of electronic information available to academic researchers in the recent past.
Ashikuzzaman (2018) mentioned that conventional teaching and learning is gradually moving towards online. With time the concept of the digital library, virtual library, and electronic library also came into being. Electronic information resources have many advantages over traditional information resources. For teaching and learning, electronic resources are available in web-enabled medium. Developments in e-publishing led to subscription of electronic resources to meet the users’ requirements and expectations.

Sadiku and Kpakik (2017) studied to find the extent to which computer self-efficacy can influence the easy access to information by the utilization of the library's e-resources in Nigerian universities. Findings revealed that the use of library correlated with the students' use of the library's e-resources.

Yebowaah, (2017) reported that 88.8% of the respondents were users of the Library and 65% were aware of the availability of e-resources in the Library. The determinants of e-resource utilization in the Library include the purpose of Library visit and sources of awareness of the e-resources in the Library. Besides, it was discovered that inadequate Library infrastructure, low internet bandwidth, and inadequately trained library staff were the major challenges confronting the use of e-resources of the Library. The study, therefore, recommended that efforts to improve the use of e-resources in the Library should include ways of creating user awareness by training/workshops for users and responding to the challenges confronting utilization.

Akpojotor, (2016) reported that postgraduate students of library and information science (LIS) are quite aware and use electronic information resources. The study also reported that postgraduate LIS students are skilled in the use of electronic information resources. Based on the findings the study concluded that electronic information resources are essential tools for empowering postgraduate students of library and information science in Southern Nigeria.

Katabalwa (2016) reported that the challenges encountered in the use of electronic journal resources include power outage, inadequate bandwidth, slow download speed, inability to access the resources from home, lack of training, lack of awareness, limited access to computers and difficulty in searching at the University of Dar es Salaam.

Kwadzo, (2015) showed that 96.9% of students were aware of electronic databases. Majority of students were aware of JSTOR, EBSCOhost, Emerald and Science Direct databases and were making use of these databases for their studies and research. The study further showed that lecturers were the source of an e-data base for 68.8% students and Library website was a knowledge source of 62.5% students.

Garg and Tamrakar (2014) in their study on Utilization of Electronic Resources by Postgraduate Students, Research Scholars and Faculty members of Indian Institute of Technology, Kharagpur reported that e-journals were preferred by the...
respondents as compared to other resources. The majority of users (63.10%) showed the awareness of e-journals and databases available in the library on the subjects of their study/research. 45.15% of the respondents mentioned that they get the required information from the e-journals. 57.28% of respondents mentioned that they get benefited from the e-alert service provided by the library regularly. The 52.66% of respondents mentioned that the library asked them their information requirements before selecting the resources for the library. 40.53% of the respondents agreed that the e-services provided by the library helped in study and research.

- **Makkini and Reddy (2014)** surveyed to find out the “Use of e-journals by the Research Scholars of Sri Venkateswara University, Andhra University and University of Hyderabad” India. The study showed that 73.03% of research scholars used e-journals for their research work. The majority of respondents, i.e., 64.52%, preferred the use of e-journals for research work but 54.61% of respondents still considered print journals as more important as compared to e-journals. The majority of research scholars (73.64%) were satisfied with the search engines. The respondents felt that lack of familiarity with searching e-journals and slow internet connectivity are the major problems in accessing the e-journals. The majority of research scholars still felt that the required information is more available in print journals as compared to e-journals.

- **Navjyoti (2007)** reported that rapid publication and availability on the desktop are the key advantages that attract research scholars. Lack of training is a major de-motivating factor in the usage of e-journals, so that needs to be improved.

- The available literature clearly indicates that most of the libraries provide e-resources to their users to support teaching, research and development. To utilize the growing range of e-databases, scientists and researchers must acquire and practice the skills necessary to exploit them. A large number of scientists are aware of the e-resources (such as e-books, e-journals, e-encyclopaedias, e-theses, CD-ROM databases, e-mail, internet, and the OPAC) and they use these e-resources for their research work.

### 5. METHODOLOGY

The instrument used for data collection was the questionnaire. The questionnaire contained multiple questions focussing the targeted information. The questions asked the respondents how often they performed certain tasks offering 3-5 possible responses. The population targeted for the study comprised of faculty and students of four of seven constituent colleges of G. B. Pant University of Agriculture & Technology, Pantnagar of Uttarakhand, India. The method used for the selection of the population was random sampling. A structured questionnaire was prepared and distributed among among the faculty members and students of 04 selected colleges. In all 1200 copies of questionnaire were distributed among users of selected colleges. Finally, 733 (61.08 %) duly completed the
questionnaires were received for the furtherance of the study. The data collected were appropriately analysed and presented.

6. RESULTS AND DISCUSSION

This paper investigates the awareness and usage of e-resources among the user's comprising faculty and students of four constituent colleges of GBPUAT Pantnagar. The study identified preferred e-resources used by these researchers and students.

6.1 USER’S RESPONSE TO QUESTIONNAIRES

Table 1: Frequency of visits (%) by users to the university library

<table>
<thead>
<tr>
<th>Periocity</th>
<th>Colleges</th>
<th>COA</th>
<th>CVAS</th>
<th>COT</th>
<th>CBSH</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Faculty</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Daily</td>
<td></td>
<td>5.56</td>
<td>3.85</td>
<td>0</td>
<td>0.00</td>
<td>13.95</td>
</tr>
<tr>
<td></td>
<td>Student</td>
<td>3.13</td>
<td>1.75</td>
<td>1.75</td>
<td>1.88</td>
<td>4.86</td>
</tr>
<tr>
<td>2-3 times a week</td>
<td></td>
<td>11.11</td>
<td>28.85</td>
<td>13.33</td>
<td>12.70</td>
<td>85.71</td>
</tr>
<tr>
<td></td>
<td>Student</td>
<td>80.00</td>
<td>71.88</td>
<td>71.88</td>
<td>60.00</td>
<td>36.06</td>
</tr>
<tr>
<td>Weekly</td>
<td></td>
<td>19.44</td>
<td>48.08</td>
<td>26.67</td>
<td>25.40</td>
<td>20.00</td>
</tr>
<tr>
<td></td>
<td>Student</td>
<td>25.00</td>
<td>25.00</td>
<td>25.00</td>
<td>20.00</td>
<td>31.20</td>
</tr>
<tr>
<td>2-3 times a month</td>
<td></td>
<td>63.89</td>
<td>19.23</td>
<td>60.00</td>
<td>57.14</td>
<td>33.33</td>
</tr>
<tr>
<td></td>
<td>Student</td>
<td>58.14</td>
<td>58.14</td>
<td>58.14</td>
<td>58.14</td>
<td>27.88</td>
</tr>
</tbody>
</table>

COA, College of Agriculture; CVAS, College of Veterinary and Animal Sciences; COT, College of Technology; CBSH, College of Basic Sciences and Humanities.

Out of 1200 questionnaires administered among users, 733 (61.08%) responses were found valid. As per earlier studies, such a response is quite satisfactory. Of the total responses, 46.66% were from faculty and 53.34% from students (Fig. 1). Thus, the response of students was marginally higher than that of faculty. Viewing response at college level showed that COA responded favourably with a response of 70% while COT (56.67%) and CBSH (57%) was a similar and poor.
6.2 Frequency of users’ visits to the University library

The frequency of visits to the University Library is an indicator of the use of library resources. Table 1 shows a very low frequency of daily visits to the library by both the category of visitors, i.e., faculty as well as students. A maximum number of users visited 2-3 times per week. An important observation was that a considerable number of users (33.33% faculty & 27.88% students) had very low frequency (2-3 times a month) library visits. Purpose of visits could be a decisive factor determining the user’s visits to the university library.

Figure 2: Frequency of visits (%) to the university library by users

6.3 Awareness of e-Resources

To know about the awareness of e-resources, respondents were asked to indicate ‘Yes’ or ‘No’. The results depicted in Fig.3 showed that 98.54% of the faculty and 81.33% of students are aware of the e-resources. Thus, it is clear that faculty as well as students of this university are keeping abreast of technological advancements in the field of digital advancements pertaining to e-resources and maximum use of digital information environment.

Figure 3: Awareness of e-Resources in percentage
6.4 Use of library services

The users were asked to indicate the library services being availed by them with their extent on the given scale of ‘never,’ ‘rarely,’ ‘occasionally,’ ‘frequently’ and ‘very frequently.’ The response was sought in respect of 8 library services. The results presented in Fig 4 showed that the extent of use of library services varied considerably. Of the available services, photocopying facility was never used by a large number of responding students (57.29%) while 17.25% of faculty respondents were also non-users of this facility (Fig. 4). Digital reference service and print journal service were among the least used library services by students in particular. The low use of print journal service by students than faculty stems from the fact that large fraction of the faculty subscribes two or more journals, on their own, for their academic/research usages. Hence, frequent needs of print journal services are fulfilled at their level itself. Issue Return Service and Web-Online Public Access Catalogue Service were mostly occasionally or frequently used. May I Help You Service was rarely used by about 30% respondents of both categories.

6.5 Learning Source for the use of e-resources

Figure 5(a): Learning Source for the use of e-resources by faculty
The respondents were asked as to how they learn to use the e-resources. The results depicted in Fig.5a and 5b showed 52.63% faculty and 68.54% respondent students never had training on this aspect. Similarly, a high percentage of respondents replied that they never had external training courses for this purpose. About 35% of the faculty and 30% of students indicated guidance from colleagues and friends as the main source of learning to use e-resources. Trial and Error approach of learning was indicated by 37.13% of the faculty respondents and 19.19% students. It is clear that access to training from university and external course have emerged as a major bottle neck for effective use of available e-resources.

6.6 The extent of awareness about specific e-resources

Figure 6(a): Extent of awareness of e-resources by Faculty
Surveyed users were asked to indicate the extent of their awareness about 13 types of e-resources on the scale ‘not at all’; ‘slightly; somewhat; ‘moderately' and ‘extremely.' Result depicted in Fig. 6a and 6b showed that level of awareness among faculty was high as 61.4 % of them responded ‘ extremely’ for “e-journals” as compared to only 19.18 % for students. For the remaining category of e-resources barring microfilm/microfiche majority of the faculty responded for the ‘moderate’ level of awareness. While for microfilm/microfiche maximum response was for poor awareness, i.e. ‘Not at all.'

6.7 Use of types of e-resources

The questionnaire asked the users about the use of different types of e-resources by indicating their response on the given scale of ‘never,' rarely, some times and often.
Results showed that response for use varied with the type of e-resources (Fig. 7a and 7b). The faculty often used e-journals (66.8%) followed by audio-video lectures (39.96%) and online database (37.13%). Of the e-resources, e-thesis, e-books and e-conference proceedings were sometimes used by the faculty. On the other hand, 35.81% of students responded e-books as often used followed by audio-video lectures and e-journals while the use of e-dictionaries, e-books and e-News papers fell in the sometimes use category. Maximum respondents, both faculty as well as students, indicated ‘Never’ response for the use of microfilm/microfiche.

6.8 Purpose of use of e-resources

Figure 8(a): Purpose of use of e-resources by Faculty
7. DISCUSSION

The findings of the present investigation revealed that although the respondents were aware of different types of electronic information resources and services available in the university library. However, their use varied with the type of service including digital information resources. In general, e-journals were the most preferred e-resource by faculty (61.40%) than students (19.18%). This finding is consistent with previous studies in similar settings (Akpojotor, 2016; Kwadzo, 2015; Garg and Tamrakar, 2014; Makkini and Reddy, 2014). The determinants of e-resource utilization in the Library include the purpose of Library visit and sources of awareness of the e-resources in the Library. The study showed that lack of library training by users appears to be a major de-motivating factor in the usage of e-resources, so that needs improvement. As such this observation is in close agreement with earlier reports (Navjyoti, 2007; Katabalwa, 2016). Therefore, library managers are required to give more emphasis on making every user aware of the various available e-resources and search strategies to promote effective use of e-resources in the university library (Yebowaah, 2017). Outcome of the findings also showed that a large proportion of the respondents made use of e-resources mostly for research, assignments, knowledge awareness and News acquisition. The results of this study show that e-journals and e-books are by far the most essential e-resources that are better known and widely used.

8. RECOMMENDATIONS

Based on the outcomes of the research findings following recommendations are made.
• Librarians should embark on continuous education of e-library users on the latest developments concerning the management and use of e-resources.
• Students should be engaged in periodic orientation on the need to acquire skills so that they can be able to maximise use of available e-resources.
• The university library should update users on the available electronic information resources. Academic staff should sensitize students on the usefulness and benefits of e-resources.
• Efforts to improve the use of e-resources in the Library should include ways of creating user awareness by training/workshops for users and responding to the challenges confronting utilization.

9. REFERENCES


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TO CITE THIS PAPER

This is certified that the paper entitled
Awareness & use of e-resources by faculty and students of agriversity Panthnagar, India

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has been accepted & published online in IJIFR continuous 71st edition


The mentioned paper is accepted after rigorous evaluation through double blind peer reviewed process.

Dated: 30/06/2019
This is certified that the paper entitled
Awareness & use of e-resources by faculty and students of agriversity Panhnagar, India

Authored by

Naved Ahmed
Librarian, Integral University, Lucknow, U.P., India

has been accepted & published online in IJIFR continuous 71st edition

The mentioned paper is accepted after rigorous evaluation through double blind peer reviewed process.

Authorised Signature With Seal

Dated: 30/06/2019