Remote Access Facilities in Tribhuvan University Central Library of Nepal

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Abstract

After the COVID-19 pandemic, Tribhuvan University Central Library (TUCL) has implemented Remote Access Services to provide more effective e-resources services for its users. It has subscribed to Pro Quest database with RemoteXs software. This software is a single portal access system which makes resources available from anywhere, anytime and twenty-four-seven. Through this portal, TUCL has been providing subscribers’ e-resource as well as other free and open access e-resources to all members of TU. The core concern of this paper is to perform a descriptive analysis of the status of the readers of TU who have connected to this software. Necessary information and data required for this study have been collected and analyzed from the records available in the TUCL RemoteXs software. RemoteXs allows a maximum of 30,000 users per year to subscribe to the software but so far only 7501 users of TU constituent unit have connected to it. Data presentation is based on the subscribers of different categories of users like faculty member, students, research scholars and staffs registered from constituent units of Tribhuvan University. This study finds that Tribhuvan University has provided e-resources service with remote access system free of cost for the users of TU constituent campuses and departments but it has not been used as expected.

Keywords: E-resources; Online resources; RemoteXs; Tribhuvan University Central Library; Library automation.

Introduction

With the establishment of democracy in the country in 1951, the Government of Nepal felt the need for a new university for higher education. As a result, Tribhuvan University was established in 1959 (Pangeni, 2076, p.30). Since then, it has ended the compulsory condition of providing higher education by affiliation with a foreign university. Now, Tribhuvan University has five Institutions, four Faculties, four Research Centers, one Central Library, sixty-two Constituent Campuses, and more than one thousand and sixty affiliated campuses (TU, 2021, p.1). It has taken the sole responsibility of providing higher education in the...
country. Among the 77 districts of Nepal, it has extended its networks in 76 districts, except for Manang (Tiwari, 2021, p.62).

During 1980s, Government of Nepal adopted the concept of a multi-university system. Therefore, ten more universities were established in Nepal. But still, more than 87 percent of the total enrolment in higher education responsibility has been accepted by Tribhuvan University. Now, it has a total of 3,351,265 students of all levels studying in the constituent and affiliated campuses (UGC, 2019).

Along with the establishment of Tribhuvan University, a library was also established in 2016 BS with a collection of a few hundred books occupying only two rooms. Now, it is the biggest library in Nepal in terms of collection, users, number of professional manpower, varieties of services and e-resources. (Tribhuvan University Central Library [TUCL], 2017, p.1). It has now over 420,000 volumes of documents, comprising of textbooks, reference books, theses/dissertations, audio books, old manuscripts, TU's archival materials, and back volumes of bound periodicals (TUCL, 2021, p.1).

As per the decision of Tribhuvan University Technical Committee in 2030 BS, the name of TU Library was changed into Tribhuvan University Central Library (Mishra, 2075, p.46). With the change of name, the library's responsibility also increased. The library has been providing services not only to the professors, researchers, students, and staff of Tribhuvan University but also to any interested local and foreign person. It has the provision of becoming a member of this library and using the resources that the library has (Pangeni, 2011, p.161).

Along with the providing services for the local and foreign readers, Tribhuvan University Central Library has also introduced modern technologies in the libraries of Nepal. The library had introduced microfilms and microfiche technology for the digitization of rare documents. As per the changing time, library automation, digitization and online e-resources services have been introduced in the library. Recently, online resource services have been started with the remote access system. Through these systems, readers have the facility to view, read and download study materials from anywhere with an internet facility. The main purpose of this article is to analyze the statistics of the readers who have benefited from the remote access service recently launched by the Central Library. Based on the data of user of the remote access system till January 2021, it has tried to analyze and interpret the data to achieve the objective.

Methods

This article is fully developed using secondary resources and it became a desk review paper. The main data were collected from the related websites, journals, and government and institutional reports. TUCL database is one of the core secondary data source that has been collected and used in this study. Collected data has been edited, classified, tabulated, analyzed, and discussed thoroughly. Tabulation was made using MS-Excel.
Kalita and Singh (2020) have claimed that library orientation program is the best method to the physicians. They have easy access the library services in this program. But for the optimum utilization of these services, they need training of how to access/download the e-resources and have to organize awareness program about the medical consortium/databases. In the line of workshop, awareness program, and training, the ER MED consortium provided by National Medical Library (NML), New Delhi has been conducting such programs to its user on access and usages of e-resources.

Kaur and Mahajan (2020) found that 27.7 percent of Professors of Panjab University, Chandigarh spent their 2-3 hours on their teaching learning, 25.9 percent spent 3-4 hours, and 22 percent spent 4-5 hours in the use of library sources. There were 12.9 percent Professors who spent 5 hours or more in updating themselves but 11.1 percent spent below an hour in updating through library access.

Ge (2010) found that new faculties were more interested and spent more time in using e-resources than associate and full professors. One more interesting finding he made that male assistant professors used e-resources more regularly than female assistant professors.

Habiba and Ahmed (2020) tabulated the purposes of using e-resources by the faculty members throughout the public and private universities in Bangladesh. On the basis of “very frequently” option of the question, how often you used the e-resources? it showed that the largest number of faculty members (573, 75.5%) used e-resources for research work, followed by personal study of 560 (74.0%) faculty members, 534 (70.5%) have been using for support in teaching. Furthermore, 502 (66.3%) faculty members have been using e-resources for updating their content knowledge, and 476 (62.9%) of the users used them for searching for new learning materials respectively.

Library Automation and Digitization Work in TUCL

Since its inception, the Central Library has been dedicated to providing effective library services with the use of modern technology as per the demand of the readers in a digital era. Library automation was started from 1992 in Nepal (Sharma, 2021 p. 262). Similarly, since 1995 TU Central Library has maintained in house database to enable readers to search for reading materials in the library through intranet network (TUCL, 2004 p.13) At that time, CDS/ISIS was installed for library automation work. Since 2007, TUCL has installed Koha software which is an open source integrated library software (Tribhuvan University Central Library, 2009 p. 37). Koha is a full feature ILS including OPAC, Circulation, Acquisition and Cataloguing modules. TUCL had been working on converting data from CDS/ISIS and Win/SISI software into Koha since 2010 (TUCL, 2019). However, this software was dropped
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due to some technical difficulties on its implementation. Since 2014 AD, circulation as well as other modules have been implemented (MOU between TUCL and Tech-Out Solution, 2014). Now, more than 125,000 records are available on the OPAC system. However, due to limited resources and a lack of staff, the entire collection could not be automated. Recently accessioned books (from 1995 onwards) have been updated in the computer catalogue (TUCL, 2006, p. 12).

Before the automation, early in 2028 BS, it had microfilm and microfiche reader equipment but there is no exact record of when, where, and how it had been available (Pangeni, 2011, p.223). In October 2004, TU Central Library has reintroduced Microfilming equipment with the help of the Japanese Government's Cultural Grant Aid. It has microfilmed some important and rare materials collected in the library. However, due to the unavailability of technology, such microfilm works have been stopped and the digitization process has begun in its place (TUCL, 2019).

TU Central Library has developed a digital library since 2007 through the installation of GSDL (Greenstone Digital Library) software. Since then, the full text of the Master’s degree dissertation and Ph.D. thesis were uploaded to the digital library. After a few years, it replaced the GSDL software with Dspace software for digitization. Now, more than six thousand thesis and dissertations have been uploaded in the TUCL digital library. In addition to the thesis and dissertation, key publications of Asian Development Bank are also included in the digital library (TUCL, 2021). In this digital library, all types of electronic format resources like e-books, thesis, dissertation, reports, etc. is being uploaded from all units of Tribhuvan University. Other academic institutions can also upload their resources with approval from the TU Central Library (TUCL, 2021).

E-resources Service in TUCL

TUCL started e-resources services to Nepalese scholars to use international journal articles since 2002 AD. At that time, TUCL had provided the HINARI database which was freely available for developing countries like Nepal (TUCL, 2004). Likewise, since 2003 AD, TUCL has collaborated with the International Network for the Availability of Scientific Publications (INASP) as a National Coordinating Agency. Between 2003 to 2009, TUCL started free of cost program for the Enhancement of Research Information (PERI) as collaboration with INASP, under the PERI program. Important e-resource databases like Blackwell, EBSCO, Springer Link, John Wiley, Oxford Journals, etc. were available and accessible in that service. It provided millions of articles and thousands of journals services to Nepalese readers and scholars (Pangani, 2068 BS).
Similarly, the Library has signed an agreement with the University Grants Commission Nepal regarding the reformation and strengthening of TU Central Library (Tribhuvan University Central Library & University Grand Commission, 2014). As per the bilateral agreement, in the first phase Rs. One crore and in the second phase Rs. 6,210,000 was provided by UGC Nepal for the subscription of e-resources. With the received amount, USD 46,000 was sent to INASP, UK as payment for e-resources databases like OECD e-library, EBSCO Host, Cambridge University Press and Emerald (Shrestha, 2071 p.20-19). However, TUCL could purchase these databases INASP, UK only for a year. During this time, Nepal was also suffering from the consequences of the Great Earthquake of 2072 BS. So TUCL requested INASP to renew the databases. As per the request, INASP had continued providing the database until 2018 (Sharma, 2078 p.263). This database was limited to only Tribhuvan University, Kirtipur, but was also made available to the affiliated campuses of the university as well as other educational institutions in the country, free of cost (TUCL, 2017 p.16).

Likewise, TU Central Library has also subscribed not only JSTOR but also the Project MUSE databases through NeLIC (Nepal Library and Information Consortium) and twenty more databases for free from where one can find online Journal articles which are useful for teachers, research scholars, and students alike, accessed from IP base system (TU Central Library Brochure, 2019). Another noteworthy service available here is the Nepal Journals Online (NepJOL) which was launched in 2007 in collaboration with INASP, UK. This database was initiated and has been maintained by TU Central Library (Adhikari, 2021,p.514). There are altogether 241 Nepalese indigenous journals that have been enlisted in this NepJOL System (Nepal Journal Online, 2022).

TU Central Library has installed a digital library wall inside the library with the help of British Council Nepal. Installation was completed on the 23rd of February 2020. The digital wall consists of active QR codes and two I-pads to access the database provided by British Council. It will allow the library users to access international databases consisting of thousands of world-famous e-magazines, e-journals, and e-books through electronic device (TUCL, 2020).

During the pandemic, TU Central Library expanded international relations with the Asian Development Bank [ADB] and National Digital Library of India [NDLI]. It has signed MoU with the Asian Development Bank with the aim of providing access to its digital collection for users of TU Central Library. More than 300,000 digital resources are available in its data storage (TUCL & ADB, 2020). There was also a collaboration for e-resources sharing and capacity building work with National Digital Library of India (NDLI) on 23 November 2020. It is phase-wise collaboration plan and in initial phase altogether 15,000 members from professors, researchers, students, and staff of TU will be permitted to access digital library online resources. Useful e-resources for the students, faculties & researchers
of schools to universities are available (TUCL&NDLI, 2020) in this digital repository. Likewise, Tribhuvan University has subscribed ProQuest database with remote access service on 18 Nov. 2020 (Tribhuvan University Central Library & Nuevo International, 2020). No cost will be there in the services of e-resources to the faculties, students, staff members, and researchers of TU. ProQuest covers many multidisciplinary subjects from different leading publishers, and it is the depository of different journals, e-books, dissertations, news, and videos (Sharma, 2077, p.4).

Results

Remote Access Service Starts on TU

Due to the global impact of Covid-19, the library was unable to provide physical reading services to its readers. Therefore, it has started remote access service from 20 November 2020 with RemoteXs software which can be subscribed by 30,000 users within a year (Tribhuvan University & Eclat Engineering, 2020). This software was developed by Eclat Engineering Pvt. Ltd, India, and Nuevo International, Nepal. Nuevo International, Nepal is an authorized official for RemoteXs software in Nepal. RemoteXs is a cloud-based service model and has the ability to provide secured access to scattered e-resources of the institution through a single portal and can accessed from both in-campus & off-campus locations. The available resources can be easily browsed and used in any kind of portable devices that you have like Laptops, tablet, Netbooks, mobile phones and even in the computers (RemoteXs, n.d.).

Tribhuvan University professors, students, staff, and researchers will be able to use the available resources from anywhere, anytime and twenty-four-seven without any cost (TU today, 2021 p.77). To connect to this system, the readers of Tribhuvan University have to fill up the form which is available on the Central Library's website (i.e.www.tucl.edu.np). Tribhuvan University official email has been made mandatory for accessing e-resources for Tribhuvan University members (Gautam, 2021 p.97). At the time of preparing this article, total of 17,347 users have filled out the online form when only 7501 are acceptable (www.forms.office.com).

Similarly, Tribhuvan University has not limited this service to its constituent campuses and departments. But it has also been providing this service to other academic institutions of the country. As per the decision of University Executive Council dated 2077/10/12 this service is provided to the other universities and colleges users with nominal charge.

TU Central Library has been conducting online user orientation programs to facilitate its users to access ProQuest and other available database in RemoteXs system. Orientation programs have been conducted for the faculties, students, staffs & researchers of TU constituent campuses, central departments & other universities, private and affiliated colleges who are connected in TU Central Library remote access system. According to Online
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Library Management & Training Coordinating Committee of TU, more than 60 events have been already conducted between Feb. 23, 2021 to Aug. 15, 2021. These types of orientation programs are being continuously organized as per the request of the connected users and organizations.

**Users Registration in RemoteXs Software**

According to the RemoteXs user’s record in January 2021, total of 15,462 active users are connected to the TU Central Library RemoteXs system. Out of the total users 7,501 are connected from Tribhuvan University Constituent Campuses and Departments.

![Users Connected in RemoteXs Software from TU Constituent Campus/Departments](source: tucl.remotexs.co, 2022)

**Figure 1: User connected in RemoteXs**

Figure 1 shows the status of the Tribhuvan University Constituent Campuses and Department users. There are 1492 (19.89%) faculties, 196 (2.61%) staff, 314 (4.19%) Ph.D. Scholar, 237 (3.16%) M.Phil. Scholar, 2011 (26.81%), Master level students and 3251 (43.34%) Bachelor level students connected to the RemoteXs System.

**Institutes/ Faculties Wise Registered Users (RemoteXs Software)**

Out of the 7,501 active users of this software, 5,813 users are the students who are pursuing their Ph.D., M.Phil., Masters’ and Bachelor’s degrees.
Figure 2: Registered Users

Source: tucl.remotexs.com, 2022

Figure 2 shows that 112 (1.93%) students belong to the Institute of Agriculture and Animal Science. 1,114 (19.16%) users are from the Institute of Engineering. 253 (4.35%) users are under the Institute of Forestry. Likewise, 102 (1.75%) users are studying under the Institute of Medicine. Similarly, 1,262 (21.71%) from the Institute of Science and Technology; 401 (6.90%) from the faculty of Humanities and Social Science; 329 (5.66%) from the faculty of Law and 1,200 (20.64%) users from the faculty of Management.

User Category Wise Usage

Out of 7,501 active users of Tribhuvan University Constituent Campuses, only 2,865 users login and use required e-resources properly.

<table>
<thead>
<tr>
<th>S.N.</th>
<th>Category</th>
<th>Users</th>
<th>Logins</th>
<th>Total Downloads</th>
<th>Download Data (MBs)</th>
<th>Browsing Data (MBs)</th>
<th>Total Data (MBs)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Faculties</td>
<td>786</td>
<td>5,867</td>
<td>11,811</td>
<td>53,754.02</td>
<td>38,277.61</td>
<td>92,031.63</td>
</tr>
<tr>
<td>2</td>
<td>Ph.D Scholar</td>
<td>204</td>
<td>2,451</td>
<td>5,867</td>
<td>22,635.94</td>
<td>14,868.88</td>
<td>37,504.82</td>
</tr>
<tr>
<td>3</td>
<td>M.Phil. Scholar</td>
<td>116</td>
<td>673</td>
<td>941</td>
<td>17,533.33</td>
<td>4,160.36</td>
<td>21,713.69</td>
</tr>
<tr>
<td>4</td>
<td>Master Level Students</td>
<td>778</td>
<td>3,630</td>
<td>3,842</td>
<td>11,628.74</td>
<td>2,445.78</td>
<td>14,074.52</td>
</tr>
<tr>
<td>5</td>
<td>Bachelor Level Students</td>
<td>893</td>
<td>2,544</td>
<td>1,780</td>
<td>4,522.16</td>
<td>1,703.69</td>
<td>6,225.85</td>
</tr>
<tr>
<td>6</td>
<td>Staff</td>
<td>88</td>
<td>1,136</td>
<td>1,630</td>
<td>3,050.42</td>
<td>7,808.31</td>
<td>10,858.73</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>2,865</td>
<td>16,301</td>
<td>25,871</td>
<td>97,344.61</td>
<td>106,609.9</td>
<td>203,954.6</td>
</tr>
</tbody>
</table>

Source: tucl.remotexs.com, 2022
Table 1 shows that total 2865 users are active users to have logged in 16,301 times and 25,871 items have been downloaded. Similarly, total download data is 97344.61 Mbs and total browsing data is 106609.9 Mbs. Likewise, total downloaded and browsing data is 203954.6 Mbs.

Available e-Resources Wise Usage

In the RemoteXs software, the university has included subscribed database as well as other free and open access resource databases. It allows the readers to access multiple databases from a single location.

### Table 2. Available e-Resources Wise Usage

<table>
<thead>
<tr>
<th>S.N.</th>
<th>Resource Created Date</th>
<th>Total Downloads</th>
<th>Download Data (MBs)</th>
<th>Browsing Data (MBs)</th>
<th>Total Data (MBs)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>ProQuest Nepal Journal Online</td>
<td>2020.11.18</td>
<td>25475</td>
<td>106618.83</td>
<td>73323.23</td>
</tr>
<tr>
<td>2</td>
<td>(NepJOL) Directory of Open Access Journal (DOAJ) UN Digital Library</td>
<td>2020.11.27</td>
<td>2893</td>
<td>1340.9</td>
<td>34642.71</td>
</tr>
<tr>
<td>3</td>
<td>(Nepal National Digital)</td>
<td>2021.2.24</td>
<td>2</td>
<td>18.53</td>
<td>9909.58</td>
</tr>
<tr>
<td>4</td>
<td>Library of India (NDLI) Directory of Open Access Book (DOAB) Networked Digital</td>
<td>2021.2.25</td>
<td>233</td>
<td>946.6</td>
<td>8018.24</td>
</tr>
<tr>
<td>5</td>
<td>(NDLTD) Asian Development Bank (ADB)</td>
<td>2021.2.26</td>
<td>55</td>
<td>159.92</td>
<td>1546.84</td>
</tr>
<tr>
<td>6</td>
<td>Shodhganga</td>
<td>2021.5.2</td>
<td>4321</td>
<td>4910.35</td>
<td>3506.5</td>
</tr>
<tr>
<td>7</td>
<td>TUCLeLibrary</td>
<td>2021.8.31</td>
<td>406</td>
<td>331.94</td>
<td>353.29</td>
</tr>
<tr>
<td>TOTAL</td>
<td></td>
<td>33618</td>
<td>114498.7</td>
<td>144382.6</td>
<td>258881.3</td>
</tr>
</tbody>
</table>

Source: tucl.remotexs.co, 2022

Table 2 clearly shows that there are altogether 10 databases. Total 33618 items have been download from these databases in which 25475 items have been downloaded from ProQuest database. That means ProQuest is at the top of available databases in this software. Similarly, 2893 items have been download from NepJoL, 2 items have been downloaded from DOAJ, 233 items have been downloaded from NDLI, 233 items have been downloaded
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from DOAB, 55 items have been downloaded from ADB, 4321 items have been downloaded from Shodhganga database, 406 items have been downloaded from TUCL e-library which is included in the RemoteXs software from 2021 AD. From these databases, 114498.7 Mbs data has been downloaded, 144382.6 Mbs data has been browsed and total of 179942.06 Mbs data has been download and browsed. Users can't download any items from UN Digital Library Nepal and NDLTD databases.

Conclusion

Since 2002, TU Central Library has been providing e-resources services to Nepalese scholars to use international journal articles from HINARI full text database which is freely available for developing countries. Similarly, since 2003 it has collaborated with INASP, UK as a national Coordinating Agency and provided free of cost e-resources database services like Blackwell, EBSCO, Springer Link, John Wiley, Oxford Journals, etc. under the PERI Program till 2009. Likewise, TU Central Library has subscribed some e-resources databases like OECD e-library, EBSCO Host, Cambridge University Press, Emerald from 2014 onwards and its services continued till 2018.

After the impact of COVID-19, Tribhuvan University has subscribed to ProQuest database with RemoteXs services and has successfully implemented various types of database through off campus services. Although this service allows 30,000 users per year, only 7501 users have registered in this system. These e-resources service have also been provided to other academic institutions of the country. Now total 15,462 users have altogether registered in this system.

Among the 15462 registered users, 7501 users are from the TU Constituent Campuses and Departments and 2865 users have been engaged in logging in, downloading and browsing e-resources form other respected institutions. In this software, ProQuest database and other nine free and open access database are also included which is accessible from anywhere, anytime and twenty-four-seven. This service has been made available free of cost for the users of TU constitute campus and department. Out of the active users, maximum users are students belonging to the Institute of Science and Technology. Out of the available resources in RemoteXs system, ProQuest Database is used by maximum number of users which is still far less than expected. The mandatory provision of official email for logging in and the unfamiliarity with new technology may be the two main reasons for the e-resources not being used as expected. So, it is necessary to conduct frequent orientation programs and to make the databases more accessible to the subscribers in order to increase the number of active users.
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