Use of the Internet by Faculty and Research Scholars at Gulbarga University Library

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Introduction

Communication technology plays a vital role in the development of society. Vast amounts of data are transmitted in seconds, and Internet access offers unimaginably large amounts of information, data, and interpreted materials. As a powerful and dynamic tool for communication, it is the largest single source of information at the global level (Maheswarappa and Emmanuel, 2003).

The Internet presents a challenge for Library and Information professionals in providing information services. The Internet has many resources that can be harnessed by academics for scholarly work (Edwin and Markwell, 2005). Use of the Internet is changing research, teaching, and learning. The expansion of available information brings increasing dependence on the source. Use of the Internet by research scholars is an important area of study in today’s information environment. The Internet plays a pivotal role in meeting information and communication needs of academic institutions, since “it makes it possible to access a wide range of information, such as up-to-date research reports, from anywhere in the world. It also enables scholars and academic institutions to disseminate information to a wider audience around the globe through having web sites and a way to search them and organize the output” (Luambano and Nawe, 2004).

ICT developments at the Gulbarga University

Gulbarga University was established in 1980 and has achieved academic and research excellence with 39 Post-graduate departments and P.G. Centres at Sandur, Bellary, Raichur and Bidar. The library has more than 220,000 books, subscribes to 435 journals, and 16 CD-ROM databases. The University has entered into an agreement with the University Grants Commission (UGC) of India and the Information and Library Network (INFLIBNET) to participate in the countrywide Infonet e-journal consortium. The University computer network has a state-of-the-art fiber optic network and wireless network link to the. The Virtual Learning Resource Centre and Digital Library developed with the financial assistance of Infosys Foundation, Bangalore. The library provides Internet Access Facility (IAF) service to all library members with 100 computers (donated by Infosys Foundation, Bangalore), free of charge for browsing e-resources. Use and awareness of Internet resources by faculty members and research scholars must be investigated so that the findings of such a study may be taken into consideration in the
university plans for effective and efficient use of Internet for research work and simultaneous improvement of e-resources of its libraries.

**Objectives**

The purpose of this study is to explore the use and awareness of the Internet facilities and resources by faculty members and research scholars of Gulbarga University, Gulbarga.

- To identify awareness of the Internet and its resources;
- To study the use of the Internet by the faculty members and research scholars;
- To find out the extent of use of the Internet;
- To identify the purposes for using the Internet;
- To discover problems faced by the faculties and researchers;
- To discover the satisfaction level with Internet-based resources and facilities;
- To suggest ways to improve the Internet-based resources in the library.

**Literature Review**

There is a lot of literature on the use and awareness of the Internet. The present study is an attempt to establish and exhibit the status of Internet resources, services, use, and awareness at Gulbarga University.

Maheswarappa and Emmanuel (2003) conducted an exploratory study at Gulbarga city, showing a high rate of computer knowledge. Mahajan (2006) conducted a study on Internet use by researchers in Punjab University, Chandigrah, which analyzed how the convergence of information and communication technologies, as embodied by the Internet, has transformed the present day society into a knowledge society. Chandran (2000) carry out a study on the use of Internet resources and services in S.V. University, Tirupati, indicating that more than 56 percent of respondents used to the Internet to access information. Kaur (2000) studied Guru Nanak Dev University, and Bavakutty and Salih (1999) conducted a survey at Calicut University, which showed that students, research scholars, and faculty members used the Internet on education and research purpose. Madhusudhan (2007) conducted a survey on Internet use by research scholars at Delhi University, which revealed that most respondents used search engines more than subject gateways or web directories to locate information. Negative attitudes as well as conservatism act as barriers to effective Internet use.

Internationally, there are a number of studies on Internet facilities. Asemi (2005) conducted a study in University of Isfahan, Iran. One hundred percent of users frequently used the Internet. A number of academic user studies have also reported that email is the most used Internet resource for staff and students (Ojedokun and Owolabi, 2003; Applebee et al., 1997; Adele et al., 1995; Tillman and Ladner, 1992). Marklein (1997) indicates that the use of email by college students in the US is so common that for some of them, “It is like picking up a phone”. In one study, researchers used survey data to extrapolate that 9.1 million college students use email regularly and 6.1 million use it almost daily. Some studies have revealed that academic staffs use the Internet in various ways to enhance teaching and learning. Jefferies and Hussein (1998) reported that teaching faculty construct web pages to help structure students gather data and to provide access to other resources. Students, on the other hand, use email to communicate with their peers and with their tutors. The researchers emphasized the fact that students preferred to email their tutors rather than have face-to-face meetings.
Methodology

Data was collected using a questionnaire. The survey covers research scholars and faculty members. There are 39 postgraduate departments in the university, of which questionnaires were distributed to departments of science and technology, commerce and management, law and social science, with only arts faculty excluded.

A total of 305 questionnaires were distributed, 112 to faculty and 193 to research scholars. A total of 214 valid questionnaires were collected from faculty members (67) and research scholars (147). The response rate was 70.16%.

Results and Discussion

The results in table show that all have knowledge of Internet.

Table: 1. Awareness of Internet

<table>
<thead>
<tr>
<th>Academic Status</th>
<th>Frequency</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Faculty member</td>
<td>67</td>
<td>67</td>
<td>0</td>
</tr>
<tr>
<td>Research Scholar</td>
<td>147</td>
<td>147</td>
<td>0</td>
</tr>
<tr>
<td>Average</td>
<td>100</td>
<td>100</td>
<td>0</td>
</tr>
</tbody>
</table>

Experience

The majority of respondents had 2-4 years experience of accessing the Internet. It is interesting to note that faculty members had a longer experience of using the Internet than research scholars and that nearly one-fifth of the research scholars had been using the Internet for less than a year.

Table: 2. Internet use

<table>
<thead>
<tr>
<th>Academic Status</th>
<th>&lt; 1 year</th>
<th>1-2 years</th>
<th>2-4 years</th>
<th>&gt;4 years</th>
</tr>
</thead>
<tbody>
<tr>
<td>Faculty member</td>
<td>0</td>
<td>09</td>
<td>31</td>
<td>27</td>
</tr>
<tr>
<td>Research Scholar</td>
<td>29</td>
<td>34</td>
<td>54</td>
<td>30</td>
</tr>
<tr>
<td>Average</td>
<td>13.06</td>
<td>20.09</td>
<td>39.71</td>
<td>26.63</td>
</tr>
</tbody>
</table>
Frequency

To assess frequency of use, respondents were asked to indicate any of six time periods. About one-third use with Internet 2-3 times a week, and nearly another third use it daily.

Table: 3. Frequency of Internet use

<table>
<thead>
<tr>
<th>Academic Status</th>
<th>Daily</th>
<th>2-3 times per week</th>
<th>Once a week</th>
<th>Fortnightly</th>
<th>Monthly</th>
</tr>
</thead>
<tbody>
<tr>
<td>Faculty member</td>
<td>18</td>
<td>13</td>
<td>33</td>
<td>3</td>
<td>0</td>
</tr>
<tr>
<td>Research Scholar</td>
<td>41</td>
<td>59</td>
<td>30</td>
<td>12</td>
<td>5</td>
</tr>
<tr>
<td>Average</td>
<td>27.6</td>
<td>33.6</td>
<td>29.4</td>
<td>7</td>
<td>2.3</td>
</tr>
</tbody>
</table>

Location

Respondents have access through the library and their departments. It is important to point out that all departments provide Internet access to faculty and few provide it to research scholars. A majority of respondents reported that they accessed the Internet through the central library, more than one-third through their departments, while about one-quarter use a central computer lab and slightly less than one-fifth at home. Departments and home were most popular with faculty, while research scholars chose the central library and Internet cafés.

Table: 4. Location of Internet use

<table>
<thead>
<tr>
<th>Academic Status</th>
<th>Internet Café</th>
<th>Central computer lab</th>
<th>Central library</th>
<th>Department</th>
<th>Home</th>
</tr>
</thead>
<tbody>
<tr>
<td>Faculty member</td>
<td>19</td>
<td>16</td>
<td>27</td>
<td>43</td>
<td>32</td>
</tr>
<tr>
<td>Research Scholar</td>
<td>57</td>
<td>41</td>
<td>109</td>
<td>26</td>
<td>7</td>
</tr>
<tr>
<td>Average</td>
<td>35.51</td>
<td>26.63</td>
<td>63.55</td>
<td>37.24</td>
<td>18.22</td>
</tr>
</tbody>
</table>

Purpose

Nearly half of respondents use the Internet for research, an almost equal number for education, and about one-third for communicating with colleagues and editors of scholarly journals, with only 15 percent reporting using it for entertainment.

Table: 5. Purpose for Internet use

<table>
<thead>
<tr>
<th>Academic Status</th>
<th>Research</th>
<th>Education</th>
<th>Entertainment</th>
<th>Communication</th>
</tr>
</thead>
<tbody>
<tr>
<td>Faculty member</td>
<td>21</td>
<td>39</td>
<td>0</td>
<td>26</td>
</tr>
<tr>
<td>Research Scholar</td>
<td>76</td>
<td>53</td>
<td>33</td>
<td>45</td>
</tr>
<tr>
<td>Average</td>
<td>45.33</td>
<td>43.0</td>
<td>15.42</td>
<td>33.18</td>
</tr>
</tbody>
</table>
Internet Resources

More than 60 percent of respondents use the Internet for e-journals, with lower but substantial numbers for other kinds of resources.

Table: 6. Use of Internet resources

<table>
<thead>
<tr>
<th>Academic Status</th>
<th>E-journals</th>
<th>Databases</th>
<th>Technical Reports</th>
<th>ETDs</th>
<th>E-books</th>
<th>Reference documents</th>
<th>Conference proceedings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Faculty member</td>
<td>43</td>
<td>4</td>
<td>7</td>
<td>17</td>
<td>21</td>
<td>14</td>
<td>19</td>
</tr>
<tr>
<td>Research Scholar</td>
<td>87</td>
<td>9</td>
<td>13</td>
<td>24</td>
<td>29</td>
<td>35</td>
<td>40</td>
</tr>
<tr>
<td>Average</td>
<td>60.75</td>
<td>6.07</td>
<td>9.34</td>
<td>19.16</td>
<td>23.26</td>
<td>22.90</td>
<td>27.57</td>
</tr>
</tbody>
</table>

Browsing Methods

More than three-fifths of respondents use search engines, while one-third type the web addressed directly, nearly one-fifth use Internet gateways, and less than 10 percent use subscription databases (USD).

Table: 7. Ways to browse information from the Internet

<table>
<thead>
<tr>
<th>Academic Status</th>
<th>Website</th>
<th>USD</th>
<th>Internet gateways</th>
<th>Search engines</th>
</tr>
</thead>
<tbody>
<tr>
<td>Faculty member</td>
<td>23</td>
<td>11</td>
<td>16</td>
<td>42</td>
</tr>
<tr>
<td>Research Scholar</td>
<td>49</td>
<td>7</td>
<td>23</td>
<td>93</td>
</tr>
<tr>
<td>Average</td>
<td>33.64</td>
<td>8.41</td>
<td>18.22</td>
<td>63.08</td>
</tr>
</tbody>
</table>

Search Engines

Search engines are the main tool for locating information. Google is by far the most preferred search engine with an 80.37 percent response.

Table: 8. Use of Search engines

<table>
<thead>
<tr>
<th>Academic Status</th>
<th>Google</th>
<th>AltaVista</th>
<th>Yahoo</th>
<th>Rediff</th>
<th>MSN</th>
<th>Khoj</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>Faculty member</td>
<td>48</td>
<td>27</td>
<td>13</td>
<td>19</td>
<td>21</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Research Scholar</td>
<td>124</td>
<td>44</td>
<td>35</td>
<td>34</td>
<td>27</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Average</td>
<td>80.37</td>
<td>33.18</td>
<td>22.43</td>
<td>24.76</td>
<td>22.43</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

Internet Services

Three-quarters of respondents chose email as the most important Internet service, with more than one-half also indicating search engines.
Table: 9. Use of Internet services

<table>
<thead>
<tr>
<th>Academic Status</th>
<th>DG</th>
<th>WWW</th>
<th>SE</th>
<th>Chat</th>
<th>FTP</th>
<th>FAQ</th>
<th>Email</th>
</tr>
</thead>
<tbody>
<tr>
<td>Faculty member</td>
<td>33</td>
<td>36</td>
<td>41</td>
<td>17</td>
<td>9</td>
<td>11</td>
<td>49</td>
</tr>
<tr>
<td>Research Scholar</td>
<td>46</td>
<td>68</td>
<td>73</td>
<td>62</td>
<td>24</td>
<td>19</td>
<td>113</td>
</tr>
<tr>
<td>Average</td>
<td>36.91</td>
<td>48.60</td>
<td>53.27</td>
<td>36.91</td>
<td>15.42</td>
<td>14.01</td>
<td>75.70</td>
</tr>
</tbody>
</table>

**Difficulties**

Downloading is a problem for more than half the respondent, while irrelevant information is also a problem for about half. Slow speed is a problem for nearly one-third.

Table: 10. Difficulties of accessing the Internet

<table>
<thead>
<tr>
<th>Academic Status</th>
<th>SS</th>
<th>FRI</th>
<th>LoT</th>
<th>IO</th>
<th>DP</th>
<th>II</th>
</tr>
</thead>
<tbody>
<tr>
<td>Faculty member</td>
<td>28</td>
<td>34</td>
<td>21</td>
<td>18</td>
<td>24</td>
<td>38</td>
</tr>
<tr>
<td>Research Scholar</td>
<td>39</td>
<td>69</td>
<td>74</td>
<td>62</td>
<td>102</td>
<td>73</td>
</tr>
<tr>
<td>Average</td>
<td>31.31</td>
<td>48.13</td>
<td>44.39</td>
<td>37.38</td>
<td>58.87</td>
<td>51.87</td>
</tr>
</tbody>
</table>

**Satisfaction**

Nearly half of respondents are fully satisfied with Internet facilities, and more than one-quarter are partially satisfied.

Table: 11. Satisfaction with Internet facilities

<table>
<thead>
<tr>
<th>Academic Status</th>
<th>Fully satisfied</th>
<th>Partially satisfied</th>
<th>Least satisfied</th>
<th>No comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Faculty member</td>
<td>37</td>
<td>20</td>
<td>13</td>
<td>3</td>
</tr>
<tr>
<td>Research Scholar</td>
<td>59</td>
<td>41</td>
<td>18</td>
<td>29</td>
</tr>
<tr>
<td>Average</td>
<td>44.86</td>
<td>28.50</td>
<td>14.48</td>
<td>14.95</td>
</tr>
</tbody>
</table>

**Findings**

- Faculty members have longer experience using the Internet than research scholars.
- Free Internet access is provided by the university.
- The virtual learning resource centre and digital library (central library) was the most comfortable place for accessing the Internet.
- Research and education are the top reasons for accessing the Internet.
- E-journals are the most popular Internet resource.
- The use of technical reports and electronic theses and dissertations is limited due to lack of awareness by the research scholars and students.
- Search engines are the most common way of access for more than 60 percent of respondents.
- All respondents browse using search engines, with Google preferred by more than 80 percent.
- E-mail was the most popular Internet service, followed by search engines.
Downloading problems, irrelevant information, finding relevant information, and information overload are the major problems faced by faculty members and research scholars.

Recommendations

- There is need to increase awareness about resources such as OPACs, information gateways, groups, discussion forums, etc.
- There is need to develop knowledge about use of electronic theses and dissertations, technical reports, patents, etc., available online.
- Compared to the total number of students, research scholars, and faculty members, the number of users using the Internet is small. Further, those who do use the Internet do not have adequate knowledge of the above-mentioned resources. Therefore, it is recommended that users of the Gulbarga University Library be educated about these resources.

Conclusion

The Internet is a major source of communication and dissemination of information in the twenty-first century. Libraries in India are rapidly transforming into digital libraries and virtual learning resource centres. It is important that Gulbarga University maintain the Virtual Learning Resource Centre with all necessary technology, for the effective use of information in higher education and research. A large portion of user populations in the university are aware about the Internet, but they do not know all its techniques and applications. Further, a few users of the university still have no knowledge about the Internet and related applications. For this purpose, there is need for effective user education, to develop awareness and knowledge of the users. More efforts by librarians at Gulbarga University are needed to educate users to effectively use the Internet and its techniques and applications.

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**Use and Awareness of Internet Facilities by Faculty Members and Research Scholars in Gulbarga University Library: A study**

**Questionnaire**

Please tick mark where necessary.

1. Name:

2. Sex:

3. Academic Status:

4. Department:

5. Are you aware of Internet?
   1. Yes
   2. No

6. If yes, how long have you been using the Internet?
   1. Less than 1-year
   2. 1 year to 2 year
   3. Two to 4 year
   4. More than 4-year

7. How often do you use Internet facilities?
1. Daily
2. 2 or three times in week
3. Once in week
4. Fortnightly
5. Monthly
6. Hardly ever

8. From which place do you use the Internet? {Please tick all that apply}

1. Internet cafes
2. Central computer lab
3. VLRC & DI (Central Library)
4. Department
5. At home
6. Any other please specify

9. Which purpose do you use the Internet? {Please tick all that apply}

1. Research
2. Education
3. Entertainment
4. Communication
5. Any other please specify

10. Which of the following resources do you use on Internet? {Please tick all that apply}

1. E-journals
2. Databases
3. Technical reports
4. ETDs
5. E-books
6. Reference document
7. Conference proceedings

11. How do you locate the require information on the Internet? {Please tick all that apply}
Website/URL

- Use subscription databases
- Internet gateways
d. Search engines
- Any other please specify

12. Which search engine do you use? {Please tick all that apply}

1. Google
2. AltaVista
3. Yahoo
4. Rediff
5. MSN
6. Khoj
7. Other please specify
13. Please indicate your awareness of the following services provided on Internet (Please tick all that apply)

1. Discussion group
2. WWW
3. Search engine
4. Chatting
5. FTP
6. FAQs
7. E-mail

14. Which difficulties do you face while using Internet? (Please tick all that apply)

1. Slow speed
2. Finding relevant information
3. Lack of training
4. Information overload
5. Downloading problem
6. Irrelevant information

15. Are you satisfied with the Internet facilities provided by in the central library?

1. Fully
2. Partially
3. Least satisfied
4. No comments

16. If not please suggest some suggestions for improvement of Virtual Learning Resource Center and Digital Library services

Thank you for your time and completing this questionnaire.

Signature.