Abstract

This paper investigated the extent at which undergraduate and postgraduate students of the University of the Philippines, Diliman use the e-resources of the General Reference Section of the Main Library. It was found that students are barely utilizing the e-resources provided by the University Library due to inadequate awareness and mobilization. There is also a need for the provision of more e-books and e-journals primarily because the students need them to stay updated in their various fields of study.

Keywords: E-resources, User assessment, Online searching, User satisfaction, Academic library, Impact on users

Overview

The concept of e-resources cannot be fully understood without examining its origins or historical background. This article reveals a benchmark on how students of the University of the Philippines Diliman use the e-resources of the institution.

A few years ago, the library served as an intermediary between the complex databases search system and the person needing the information. Now it serves as coach and tutor for the end-user conducting the search.

For the purpose of clarity, Electronic Resources (E-Resources) in this research means any or all of the following electronic items:

1. E-journals
2. Electronic books
3. Reference books
4. Reference databases, and others which the library has acquired for use and which can be accessed via university network.
Research Questions

The following research questions were raised by the researcher:

1. What are the electronic resources most often used by students in their studies?
2. What is the nature of the electronic resources that students think should be provided by the University?
3. What is the level of satisfaction of students with the electronic resources provided in the library by the University?
4. What are the electronic resources that students would like the University to provide in the library?
5. What are the benefits of the usage of the e-resources on the students?

Introduction

The history of electronic resources began with the development of computer-assisted typesetting and printing. The publishers of indexing and abstracting services first used computers to print their paper products. They created magnetic tapes that were interpreted by a computer and drove their printers. Computers could also read these magnetic tapes for other purposes. Companies and government agencies, such as the National Library of Medicine in the United States, developed computer software that could read and manipulate the information on these tapes. This software allowed reference librarians in those organizations to ask the computer to “search” for an indexed term or a group of terms determining if there were bibliographic citations of articles on these tapes that would meet the information needs of their users. Because of the technology available at that time, magnetic tape and punch cards processed the queries very slowly. These searches had to be done in batch mode. The query was keyed in during the day, the magnetic tape was ran against the query at night, and the results were delivered the next day. Any typographical or logical errors in the query would require redoing the entire search and waiting for the new results in the subsequent days. These single-agency search systems formed the foundation of the information retrieval industry in the 1960s.

In recent years, there has been a vast expansion of the world of end-user searching far beyond the scope of the local CD-ROM, workstation, and even beyond the walls of the reference room. The primary audience for current electronic information resources is the end-user. With the development of the World Wide Web (WWW), combined with the proliferation of low-cost computers and ready access to the Internet, the mass audience’s need to support these expanded services now exists. The web provides a common platform for the delivery of electronic resources to users: it is format-independent. One of the Web’s primary attractions is the ability to provide access to electronic resources to any location on the globe. Libraries are now able to provide resources to their users wherever they happen to be.

Based on these historic facts, the study upholds most of its features especially the search engines, web sites applications in regard to World Wide Web. As someone puts it, if a new tool is acquired, everything must be processed with the tool as well. If libraries have Web sites, everything must go up on the Web.

E-resources Utilization Rate for Users

To aid users utilize e-resources well, students at all levels must be guided on how to
improve their skills in surfing the numerous e-resources available. Dutton, (1990) suggested that the skills required to maximize the potential of electronic resources are much greater than those required for searching printed sources. Users should be knowledgeable enough to be able to search databases available to them and this calls for in-depth understanding of the basis and fundamental of the e-resources at their disposal.

Brophy (1993) argues, that libraries must “reach a position where the acquisition of information skills is acknowledged as one of the key learning objectives for every student entering a university, so that no student leaves without being fully equipped to cope with the information intensive world – the information society – as an end-user”. Giving the students this intensive training can help them cope with the dynamic society when confronted with multitasking jobs.

Students should be provided with hands-on activities in the school to enable them gain proficiency in the labor market. E-resources strive well with the Internet TCP/TP protocols, where high speed fiber optic network of networks around the world communicate to transfer data and information file using transfer protocol (FTP) to locate information on the world wide web (WWW), and access remote computer system as in online catalogue and electronic databases (Liman, 2014).

Oyedum (2007) opined that online searching is a type of information technology applicable in library services. On this platform, databases or other sources of information is searched via the use of personal computers, workstations that are linked to particular destination. Databases can be mounted in a particular location and it can be surfed or accessed in another remote location altogether. These information can also be saved in CD-ROM’s and make available through the network system or even serve as off-line resources.

Oyedum, (2007) enumerates benefits of online searching as follows:

- Online searching provides fast responses;
- Powerful retrieval capabilities like multiple file searching and scanning many files at a time.
- Saves searching time.

**Types of E-Resources Available for Libraries**

University of Chicago Library has nine different types of e-resources available to its users: (1) Research Guides by Subject – this provides an overview of resources in a subject area. The guides can be located from their Database Finder page or from their website; (2) Indexes - a reference source which provide bibliographic information on journals and other types of materials. Online indexes have more extensive resources for its users. The platform gives more options beyond subject, author or title search and allows users to look for keywords

or phrases as well; (3) Electronic books and Texts – a variety of electronic books are available although some of these electronic books are part of the searchable databases; (4) Electronic Journals – this system has e-journals database to help users locate online version of journals; (5) Library Catalogs – this provides access to catalogs from the web sites showing information about the holding in the library; (6) Reference Source – this online platform houses dictionaries, almanacs, encyclopedias, and other reference sources to users on full text basis; (7) Statistical Sources – the library subscribe databases that provide economic data or statistics to its users. Users can locate these statistical resources online to aid their research activities; (8) Sound Recordings – some few library databases provide access to sound recordings, and; (9) Image Databases – such as Art, Maps, and others, are included in the databases for users to utilize.

Surfing these e-resources has tremendous effect on users and students alike. The technical know-how on how to utilize these resources is paramount to the successful retrieval of e-resources.

Burgstahler (2012) stressed the need for equal access to all patrons in libraries. He opined that some users who used assistive technology to access electronic resources had challenges in doing so. He outlined those drawbacks as to library websites, online catalogs, electronic books, indexes to literature, full-text journal articles, and electronic reserve services. These challenges came as a result of the technology being used by the patron. Technology, tools and devices should be made available to all patrons for use in surfing e-resources. At the same time, both patrons and librarians are to be trained and provided with access to the network and the various databases and e-resources at hand. Libraries must take note of this dilemma as enumerated by Burgstahler (2012) that because of poor design of electronic resources students suffer online accessibility.

**Methodology**

Questionnaires were administered to students primarily undergraduate and graduate students. Eleven questions were listed and 100 questionnaires were given to students of the University of the Philippines who used the General Reference Section of the Main Library. Percentage distribution analyses were used, as well as bar graphs and tables. Out of the 100 questionnaires administered to the respondents, only 60 (60%) were successfully returned for computation.

**Interpretation and Presentation of the Results**

1. What are the electronic resources you use often in your studies?
This analysis shows that the e-resources highly used are e-books, reference databases, and reference books with 42%, followed by Proquest with 12%, and others at 2% to 7%. This survey purported that most of the students used e-resources supplied by the University.

2. What type of resources do you believe should be provided by the University library?

Among these resources, journals registered the highest with 68%, followed by e-books.
with 58%, and electronic university publications (which includes doctoral theses, dissertations, and other publications) with 53%. Foreign journals with 43%, reference databases with 42%, dictionaries, glossaries, reference books with 25% and finally 1% foreign reference databases. From this analysis, it shows that majority of the respondents preferred journals, e-books and university publications to be provided by the university library.

3. How satisfied are you with the electronic resources you use in the library?

Figure 3. Distribution of respondents by satisfactory usage of e-resources

Eighteen percent (18%) of the respondents are very satisfied with the e-resources presently provided by the library, 5% indicated fairly satisfied, 25% of the respondents do not really know if they are satisfied with the e-resources or not, 7% said they are fairly dissatisfied, and none of the respondents answered the very dissatisfied option.

4. Give names of electronic resources you like your university library to acquire.

Figure 4. Distribution of respondents stating some e-resources

The data showed that 12% of the respondents wanted e-journals, followed by e-books which are 7%, JSTOR with 5%, reference books with 3%, and all other resources fall under 2%.

Many of the respondents still want and/or prefer e-journals to be acquired more for their research purposes.

5. How has the use of e-resources affected your studies?

<table>
<thead>
<tr>
<th>Responses</th>
<th>Considerably (C)</th>
<th>To some extent (TSE)</th>
<th>Not at all (NAA)</th>
<th>Don’t know (DK)</th>
<th>Total Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Made it easier to find the material I need in my studies</td>
<td>53%</td>
<td>43%</td>
<td>2%</td>
<td>2%</td>
<td>100%</td>
</tr>
<tr>
<td>Made it easier to keep up with developments in my own field</td>
<td>33%</td>
<td>55%</td>
<td>8%</td>
<td>4%</td>
<td>100%</td>
</tr>
<tr>
<td>Improved the quality of my work (results)</td>
<td>37%</td>
<td>55%</td>
<td>5%</td>
<td>3%</td>
<td>100%</td>
</tr>
<tr>
<td>Inspired new thinking/ideas</td>
<td>47%</td>
<td>47%</td>
<td>6%</td>
<td>0%</td>
<td>100%</td>
</tr>
<tr>
<td>Broadened the focus of my work</td>
<td>37%</td>
<td>52%</td>
<td>8%</td>
<td>3%</td>
<td>100%</td>
</tr>
<tr>
<td>Reduced my study time</td>
<td>10%</td>
<td>35%</td>
<td>23%</td>
<td>32%</td>
<td>100%</td>
</tr>
<tr>
<td>Reduced the amount of browsing of resources in libraries</td>
<td>42%</td>
<td>42%</td>
<td>15%</td>
<td>1%</td>
<td>100%</td>
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</table>

*Table 1. Distribution of respondents by effect of e-resources on studies*

This analysis under ‘easier to find materials’ is ranked 53% of the respondents and shows that e-resources has affected them considerably, followed by 43% of respondents indicated to ‘some extent’, and 2% for ‘not at all’ and ‘don’t know’ respectively.

Thirty-three percent (33%) of the respondents answered ‘easier to keep up with development in my field’ and 55% ‘to some extent’, 8% for ‘not all’, and 4% for ‘don’t know’. Also, with ‘improved the quality of work’, 37% of the respondents answered ‘considerably’, 55% of the respondents indicated ‘to some extent’, 5% for ‘not at all’, and 3% indicated ‘don’t know’.

Under the category of ‘inspired new thinking/ideas’ 47% ticked ‘considerably’, 47% of the respondents indicated ‘to some extent’, 6% under ‘not at all’, and 0% respondent under ‘don’t know’.

For ‘broadened the focus of my work’, 37% respondents indicated ‘considerably’, 52% for ‘to some extent’, 8% of the respondents for ‘not at all’, and 3% of the respondents for ‘don’t know’.

For ‘reduced my study time’, 10% of the respondents answered ‘considerably’, 35% indicated ‘to some extent’, 23% of the respondents answered ‘not at all’, and 32% of the respondents for ‘don’t know’ option.

For ‘reduced the amount of browsing of resources’, 42% of the respondents answered ‘considerably’, 42% of the respondents said ‘to some extent’, 15% for ‘not at all’, and 1% for ‘don’t know’ option.

Other impact of e-resources are enumerated below:
1. Just a little
2. Easy access in finding materials for research.
3. To gather up-to-date materials
4. For assignments, readings etc.
5. Retrieval of materials
6. Convenient
7. Informed about opposing approaches to certain issues
8. Don’t have to go through dusty books in the library shelves
9. Surf for materials that may not be found in the library
10. Easier to cite sources
11. To find/locate references in a faster way
12. Information is more flexible etc.

6. The main problems with using e-resources and using them for information retrieval are:

<table>
<thead>
<tr>
<th>Responses</th>
<th>Percentage per question</th>
</tr>
</thead>
<tbody>
<tr>
<td>I am not sufficiently familiar with electronic resources</td>
<td>3%</td>
</tr>
<tr>
<td>I am not able to use the electronic resources properly</td>
<td>25%</td>
</tr>
<tr>
<td>The material I need is not in use or is not available</td>
<td>47%</td>
</tr>
<tr>
<td>I have some doubts about the permanence of the material (changes in service content, discontinuing of journals, transfers, etc.)</td>
<td>3%</td>
</tr>
<tr>
<td>It is difficult to read from the screen</td>
<td>35%</td>
</tr>
<tr>
<td>Technical problems</td>
<td>4%</td>
</tr>
<tr>
<td>I cannot find the electronic resources I need</td>
<td>32%</td>
</tr>
<tr>
<td>The use of electronic resources does not present any particular problems</td>
<td></td>
</tr>
</tbody>
</table>

Table 2. Distribution of respondents by problems using e-resources

Three percent (3%) of the respondents indicated ‘not sufficiently familiar with e-resources’, 25% indicated ‘not able to use e-resources properly’, 47% said ‘the materials they need are not in use or available’, 3% of the respondents cast doubt about the ‘permanence of the materials’, 35% of have ‘difficulty reading on the screen’ 4% of the respondents attributed the problem to ‘technical’, 32% indicated that they ‘can’t find e-resources they need’, and comments such as ‘UP library wifi has less limited access and no proper orientation/training on how to use these e-resources well’.

The biggest of all the problems mentioned is the one that states that the ‘materials
needed by the respondents are not in use or available’ which had 47%.

7. What kind of training or advice do you need in connection with the use of e-resources?

![Figure 5. Distribution of respondents by training/advice needed](chart)

Forty-eight percent (48%) of the respondents said they needed ‘resource-specific training’ 3% wanted ‘specific research training’, 54% chose ‘information retrieval training’, 17% of the respondents said they needed ‘individual training’, and 2% of the respondents said they do not want any training or advice’.

8. How many scholarly articles you obtained in e-form have you read during the last month (4 weeks)?

![Figure 6. Distribution of respondents by scholarly articles surfed](chart)

This analysis showed that respondents who read more than 10 articles in a month and

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those who read 5 articles are under 75%, followed by 8 articles with 53%, 2 articles with 23%, and others ranging from 1% to 12% of respondents.

The data showed that many of the respondents make use of their surfed e-resources.

9. How did you find the last e-journal article you read?

<table>
<thead>
<tr>
<th>Responses</th>
<th>Percentage per question</th>
</tr>
</thead>
<tbody>
<tr>
<td>By browsing electronic journals or lists of contents</td>
<td>25%</td>
</tr>
<tr>
<td>By searching full-text databases of e-journals (e.g. Proquest, EbscoHost, Science Direct etc)</td>
<td>35%</td>
</tr>
<tr>
<td>By searching reference databases (e.g. iLib, webOPAC etc)</td>
<td>28%</td>
</tr>
<tr>
<td>Using an Internet search engine (e.g. Google, Google Scholar)</td>
<td>57%</td>
</tr>
<tr>
<td>Cited in another publication</td>
<td>13%</td>
</tr>
<tr>
<td>With the help of library/information service staff</td>
<td>7%</td>
</tr>
<tr>
<td>Colleague told me</td>
<td>2%</td>
</tr>
<tr>
<td>Others</td>
<td></td>
</tr>
</tbody>
</table>

Table 3. Distribution of respondents on how last e-journal was searched and read

Of all the respondents, 25% said they found their material by ‘browsing electronic journals’ and 35% found theirs by ‘searching full text databases’. Users who found their e-journal through ‘searching reference databases’ comprise 28%, while those who used the ‘internet searching engine’ make up 57%. Some users found their e-resources using other means. They make up 2% to 13% of respondents.

The above analysis indicated that majority of the respondents used ‘internet search engine’ (i.e., Google, Google scholar, etc.) frequently to search for their e-journals followed by ‘searching full text databases’ (i.e., iLib, webOPAC, etc.), ‘reference databases’ and ‘e-journals or lists of contents’.

Under ‘others’, a respondent affirmed that his course lecturer gives them a hard copy of the e-resources.

10. For what purpose have you used or will you use the information obtained from the article primarily?

<table>
<thead>
<tr>
<th>Responses</th>
<th>Percentage per question</th>
</tr>
</thead>
<tbody>
<tr>
<td>To keep up with developments in my own field</td>
<td>28%</td>
</tr>
<tr>
<td>For research and/or development work</td>
<td>77%</td>
</tr>
<tr>
<td>For some other private task</td>
<td>8%</td>
</tr>
<tr>
<td>For preparing a dissertation</td>
<td>5%</td>
</tr>
<tr>
<td>For some other studies</td>
<td>38%</td>
</tr>
<tr>
<td>Others</td>
<td></td>
</tr>
</tbody>
</table>

Table 4. Distribution of respondents by the purpose for the use of the article
Seventy-seven percent (77%) of the respondents answered for the purpose of obtaining the article ‘for research/development of work’, followed by 38% of the respondents for ‘some other studies’, and 28% of the respondents ‘to keep up with development in their fields’.

This constitutes that majority of the respondents get these materials/articles for academic purposes only.

Other purposes are enumerated as follows:
1. Referencing
2. Assignments
3. Leisure and fun reading
4. Reports
5. Review of articles etc

11. How great a proportion of the publications and information resources you need do you get from the electronic resources provided by the university library?

![Figure 7. Distribution of respondents by proportion of the publication & information resources provided by the library](image)

Thirty-eight percent (38%) of the respondents indicated the proportion of 40-60%, followed by 12% of the respondents for 60%-80%, and from 2%-7% respectively.

This shows that that the university library is somehow on the marginal performance with 38% of the respondents indicating 40-60 percent of electronic resources provided by them.

**Recommendations and Conclusion**

Students are barely utilizing the e-resources provided by the University Library due to inadequate awareness and mobilization. There is also a need for the provision of more e-books and e-journals primarily because the students need them to stay updated in their various fields.

of study.

The issue of training is also crucial. Students will need information retrieval training to enable them to surf resources satisfactorily. The respondents clearly stated that they used book print format and e-resources for their studies.

While the respondents mentioned positive effects of e-resources to their studies, they also requested the University library to provide more e-resources, such as, e-books, reference databases, reference books, and others.

Most of the articles surfed via electronic format are utilized very well by the respondents. The respondents read the articles they obtained electronically within few weeks as indicated in the research analysis. Most of these articles were used for research purposes and other studies as analyzed.

The outcome of this research work calls on the University Library management at large to consider the following issues:

1. To add more PC’s to the General Reference Section of the U.P. Main Library to serve the nation’s builders better – as leaders of tomorrow;
2. The need for more permanent staff, the university should employ enough permanent workers for the General Reference section;
3. Provide or make the iLib remotely available to the students for extensive surfing and collaboration;
4. Organize information retrieval training and resource specific training program for the students;
5. Provide more e-resources, like e-books, e-journals, and electronic university publications etc for the students;
6. Allocate more funds to General Reference section to create and/or make available resources like: e-discussion rooms, e-collaboration and e-learning section;
7. Move Social Sciences section to be a part of General Reference section so as to provide better and enhanced referral services to the students.

Information is power and every day we live and use information to make peoples’ lives better. Once students are satisfied with the resources available in their disposal, this would encourage more patronage and advertorial. The researcher is convinced that if the aforementioned steps are considered, the e-resources of the General Reference section of the University of the Philippines Main Library would be better surfed and utilized to enhance academic frontier of not only the students alone but faculty members as well.

References


