



UC Davis General Library

ADMINISTRATIVE UNIT REVIEW:

**PHYSICAL SCIENCES &
ENGINEERING LIBRARY**

August 2001

UC Davis General Library Administrative Unit Review

Physical Sciences & Engineering Library Users Perspectives Associated with Full-Text Electronic Journals August 27, 2001

Background

The UC Davis General Library has chosen to execute its Administrative Unit Review (AUR) by selecting a number of areas that could be studied in different years. The most recent area was reviewed by the librarians at the UC Davis Physical Sciences & Engineering Library (PSE). The PSE User Perspectives AUR was a survey of its faculty to determine the use and perceptions associated with full-text electronic journals versus print formats for journals. This topic was chosen because PSE had participated in General Library Administrative Unit Reviews (AUR) for Interlibrary Loan/Document Delivery and User Services. These previous AURs showed that PSE users were quite satisfied with the range of public services offered and were appreciative of the library staff efforts on their behalf.

The PSE User Perspectives survey provided an opportunity for librarians to gain some insight into the actual use and projected views of PSE faculty towards electronic resources. The survey findings will inform future decisions regarding print and electronic formats for journals in the physical sciences and engineering since the PSE Library does not have enough space to house its current collection of books and journals. In addition, these data may present interesting comparisons for the coming California Digital Library.

Survey Methodology

PSE librarians identified key issues associated with use and perceptions regarding journal literature found in electronic formats and developed a questionnaire. A prototype survey was tested with the PSE Library representatives and modifications made.

In the spring of 2001, the UCD Physical Sciences & Engineering Library staff surveyed faculty members served by the library, regarding their current use and opinions of electronic journals and their paper counterparts. The survey questioned what their future attitudes might be, when nearly everything will be available electronically.

Survey Findings

Sixty-one faculty members from ten physical sciences and engineering departments completed the survey. Approximately two-thirds were full professors; the remainder assistant and associate professors with 6% other. Seventy-five percent of all respondents always use the electronic version when available, and over 80% use electronic versions at least monthly.

Nearly all respondents reported that they continue to use print versions because:

- not all the journals they need are currently available electronically;
- backfiles do not go back far enough; and
- online versions are not always complete.

Twenty-seven percent of faculty members still have problems related to computer technology. A small, but significant, minority (10%) say that vision problems make print preferable (NOTE: The Library has installed large print public workstations in PSE, Shields Library, and both health sciences libraries in November, 2000 to address this problem when library users are in the library buildings). Some faculty (28%) still use their personal print subscriptions and twenty-five percent like to browse the print versions at the library.

Forty-two percent of faculty surveyed agreed that current online versions are generally an acceptable substitute for paper versions. A different forty-nine percent thought that online versions are often better than print versions. Only a small percentage checked other responses. In spite of this, when answering the next question, only twenty percent responded that in the future print will not be needed. Twenty-five percent thought print will only be needed under special circumstances or for a small core of journals. Thirty-nine percent thought print would be useful to have in addition to electronic.

In a free text area eighteen percent expressed concerns about the archiving of electronic versions, browsability, readability, and technical issues.

PSE AUR Conclusions

From this survey, we conclude that faculty like and use electronic journals, but they have some reservations and are not yet ready to give up print formats. It is advisable to obtain longer electronic backfiles when available and to encourage the digitization of journal backfiles.

Survey Details

UC Davis Physical Sciences & Engineering Faculty Survey

1. Department

Applied Science	5	8%
Chemical Engineering and Materials Science	7	11%
Chemistry	11	18%
Civil and Environmental Engineering	7	11%
Computer Science	5	8%
Electrical and Computer Engineering	5	8%
Land, Air and Water Resources	7	11%
Mechanical and Aeronautical Engineering	5	8%
Molecular and Cell Biology	1	2%
Physics	8	13%
Total Number of Respondents	61	100%

2. Academic Rank

Assistant Professor	11	18%
Associate Professor	5	8%
Professor	42	69%
Lecturer	1	2%
Professor Emeritus	1	2%
Adjunct Associate Professor	1	2%
Total Number of Respondents	61	100%

3. Do you use online articles for your research and teaching?

Always when they are available in electronic format	43	73%
Monthly	6	10%
Never	2	3%
Rarely	4	7%
Weekly	4	7%
Total Number of Respondents	59	100%

4. Below are some reasons that may affect your decision to use print versions. Check as many as are applicable to your research habits.

I would be more inclined to use online versions if the books or journals I need were available online.	38	62%
I find articles by browsing the paper versions of journals at the library.	15	25%
I am unaware if online versions are available.	8	13%
My computer equipment is inadequate to view online versions or print copies.	2	3%
I am unable to access many online resources from my home because I use an Internet service provider instead of a UCD account and the proxy server does not work for me.	5	8%
I am unable to access many online resources from my home because I use an service provider instead of a UCD account and I have not tried the proxy server.	7	11%
The online versions of some journals are incomplete or inadequate in some way.	20	33%
I use my personal print subscription copies.	17	28%
Sufficient backfiles of most journals I need are not online.	30	49%
I prefer print.	10	16%
System problems prevent me from getting resources online.	3	5%
Force of habit.	10	16%
Vision problems make the use of print preferable.	6	10%
Other Reasons	4	7%

Other Reasons:

1. I find it easier and quicker to browse most print.
2. I look at articles online and print them if useful.

5. Which statement below best describes how you feel about currently available online resources?

Online versions are generally an adequate substitute for print versions.	25	42%
Online versions are not an acceptable substitute for print.	2	3%
Online versions are often not an adequate substitute for print because they lack some necessary print features.	1	2%
Online versions are very useful. They are often better than the print versions.	29	49%
Other Statements	2	3%
Total Number of Respondents	59	100%

Other Statements:

1. Archival reliability
2. Online and print versions serve different purposes

6. Assuming that in the future online versions will be available for nearly all resources, what do you think your attitude toward print versions of resources that are also available online will be?

Print versions will be useful to have in addition to electronic versions.	24	39%
Print versions will not be needed.	11	18%
Print versions will only be needed for a small core of journals.	1	2%
Print versions will only be needed under special circumstances such as when print content differs significantly from the online version.	14	23%
Other (Faculty listed archival issues, browsability, readability, & technical issues as deterrents to online only.)	11	18%
Total Number of Respondents	61	100%

Comments regarding why print versions will only be needed under special circumstances:

1. Such as when journal web site is down, fast printer from computer is not available, lan connections are down and similar computer/web related problems.
2. For the long term reliability.

Comments regarding why print versions will be useful to have in addition to electronic versions:

1. Because some articles are of such a long length that it is unreasonable to view/print them simply in order to try to find a particular item/paragraph/formula of interest.

The other concern is long term backup. What measures are being taken by library/journal to ensure that journal articles will be available 100 years from now as disk drive/storage technologies and media change?

2. But I will still continue to subscribe to print versions because I like to look through the entire issue. However, whenever I need a specific article I will go to the on-line version directly and print out what I need.

Other comments regarding why print versions will still be essential:

Archival issues
 Browsing, skimming articles
 Long articles, fast printer not available, computer down
 Easier to read. Online difficulties
 Needed for long reading
 Archival/Browsing
 Browsing
 Necessary for long time archival; central depot
 Verba volant, scripta manent
 Archival; easier reading & cross referencing

7. Do you have any comments you would like to share with the library concerning either print or electronic resources?

1. It's GREAT to be able to access articles online and print them off locally rather than trudge over the library only to find that volume missing or some other problem. The main concern at the moment is that electronic versions don't go very far back and are not available for all journals of interest. This problem will obviously diminish over time. So I'm all in favor of the electronic world, but don't give up the paper! It's been around for a few millenia for a good reason...
2. I'm hoping when I'm back to "full time" research that I will be able to use these more. What I have used have been very useful.
3. I would like to see the day when the FULL ARTICLES of several other journals I regularly search are in electronic form, such as the ASME Journals, J.of the Electrochemical Society, Energy, J. of Energy Resources & Technology, etc. The journals that are fully available are great!!
4. I think we should keep printed journals as long as possible, not just for the interim.
5. One of the key journals that I like to browse is Nature and all of its affiliates. Those are currently not available electronically. Will they be made e-accessible?
6. I like the on-line versions because they are always where they should be. In the library or in my personal collection what I need is always in a missing volume. One problem with almost all on-line material is that it covers only the most recent years of the journals. To be completely effective, we need more retrospective coverage, but I'm sure you know that.
7. For research publications, unless the article is very short or of limited interest, I always print it first. That implies the need for high quality printing, that I have in my lab but not at home. I do not know of anyone who reads long articles on the screen and it has nothing to do with poor personal vision as implied in one of the questions above. Related to these comments is the need to make a distinction between articles, read from front to back, and books where jumping through sections, topics, etc is critical. Print is better suited to that type of use.
8. I don't use this resource as often as I should, but it has made library research easier, faster and more convenient. I am very appreciative of the leadership that the UCD library has taken to provide the electronic resources for me. Having said that, I still enjoy going to our beautiful library to search through the stacks to find an article and to find a quiet spot to read it.
9. For research publications, unless the article is very short or of limited interest, I always print it first. That implies the need for high quality printing, that I have in my lab but not at home. I do not know of anyone who reads long articles on the screen and it has nothing to do with poor personal vision as implied in one of the questions above. Related to these comments is the need to make a distinction between articles, read from front to back, and books where jumping through sections, topics, etc is critical. Print is better suited to that type of use.
10. An advantage of using the Online versions is access when I am unable to get to the library. Sometimes it is not clear whether an on-line version is available to me. There are some journals we do not currently have licenses for (nor do we get in paper, eg, G&B), but I may be interested to getting an occasional article. There shouldbe a way of getting it and paying the fee.

11. The access to older materials is extremely important. The current holdings in the PSL are not adequate and I continually must obtain source material from NRLF. If going to on-line materials makes this situation worse, that is a serious issue and deserves your careful consideration.
12. Question 3: The phrasing is ambiguous. I use electronic preprint servers every day, and electronic journals 2-3 times a week. But ``always" should not be interpreted as "exclusively."

Question 4: Print versions are more comfortable to read, and are vital for browsing and for skimming articles to decide whether to read them more thoroughly. It is very uncomfortable to read long articles on a computer screen. The effect of having only online versions is to shift the cost from the library system to me (I have to print them out to read them comfortably); while this may hide the cost, it doesn't eliminate it, and I suspect that if you added up the total paper and toner costs you'd find that a purely online version is more expensive. (This would *certainly* be the case if only online versions were available, since people like me would then have to print out and almost immediately discard a very large number of articles.)

Question 5: Online and print versions are each good, but their uses are very different. Online versions are useful for focused research, when I need to look at a lot of references fairly quickly, and they are helpful when I need a hard copy to read (since they print out better than most journals xerox). They are also available sooner, and are valuable for getting the most recent results. But for browsing--which is *necessary* in my field to keep track of what is going on---and for skimming papers to decide whether they are worth careful reading, print copies are currently irreplaceable, and will continue to be until the technology for reading papers on line has vastly improved. (Ask again after "electronic ink" is widely used.)

13. In responding to the above questions, i am assuming that 'online' means not only that one can view it on one's computer, but also that one can download (postscript, pdf, whatever) a version to make a hardcopy. this is certainly true for physical review. if one cannot do a download, then one would still want print versions.
14. Much depends on how convenient and time efficient it is to browse electronic collections. Many of these collections are currently very time-inefficient and awkward to browse. The major current advantages of online versions are 1) they are usually easier and more time-efficient to browse, 2) they tend to be co-located with other Journals by subject, so I can find other related journals easily, 3) most back-issues are unavailable and these tend to be the most awkward to browse, and 4) they get me out of my office to a quiet place where I can think differently. Nevertheless, I like having online versions available - it is easier to cite and direct such material to others.
15. The fax service of articles requested from other UC campuses is very efficient. I really like it.
16. We should maintain printed version journals, while going through upgrading and/or changing to electronic version journals.
17. Coverage on online journals is excellent. PSE library is one of the most useful ones I know!
18. Core journals should still exist in paper form so that they are fully accessible to students, faculty, and other researchers.
19. Electronic versions of journals are great, especially with the notification schemes that Elsevier for example emails to me. Just click on the URL and see the paper.

20. Electronic versions of journals are great, especially with the notification schemes that Elsevier for example emails to me. Just click on the URL and see the paper.
21. Each have their advantages, but neither should be used exclusively. Your survey only accepts short answers above, but people may have much longer, thoughtful responses!!!
22. I don't like to read on my screen, so when I get an electronic article, I print it before I read it. I have a high quality printer just outside my LLNL office, so this is not normally a problem, but occasionally a file which is visible on my screen will not print correctly. On the other hand, the color quality on the screen is often better, and I like the ability of the screen viewers to magnify the text and images.
23. I solely use electronic resources for journals. Visit the library only for issues prior to 1995 or so (online issues typically are available from 95 onwards). Found the library links (to e-journal, compendex, etc) at Davis to be very useful and well-maintained!
24. 1. The proxy server is great. 2. It would be useful if entire volumes could be covered with one search. Keywords given in articles are often not adequate. Not all of us stick with the conventional.
25. Use of color in some journals makes the print versions more meaningful than electronic versions for those of us without easy access to color printers.
26. We should maintain printed version journals, while going through upgrading and/or changing to electronic version journals.
27. An advantage of using the Online versions is access when I am unable to get to the library. Sometimes it is not clear whether an on-line version is available to me. There are some journals we do not currently have licenses for (nor do we get in paper, eg, G&B), but I may be interested to getting an occasional article. There should be a way of getting it and paying the fee,
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29. Electronic storage of media is very uncertain; formats vary across platforms, sometimes in ways critical to understanding the meaning of the document, and software and hardware formats change over time, making it difficult to access older documents electronically. How many of us have files on magnetic tapes, or in Lotus 1-2-3, that are now virtually inaccessible to us? Please, always have a paper backup.
30. There is a fundamental vulnerability to on-line journals that is not present with printed. Also, printed journals are easier to browse.
31. For books, browsing at the library is valuable in locating related references.
32. Likes that online versions are always accessible both on campus and at home.