

PILOT SITE LICENCE INITIATIVE (PSLI): USER PERCEPTIONS OF NECESSITY VS. NOVELTY

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In a small local survey the PSLI was evaluated at Sussex University. The variety in make and specification of hardware/software can cause installation problems, that could raise the cost. Personal contact and printed journals are still the major sources of information for researchers. When they do use electronic sources they want to be able to target their efforts effectively on a good quantity of relevant information in a readily accessible form. Since PLSI does not yet offer this facility, its usefulness is perceived to be limited.

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As we all know, the Pilot Site Licence Initiative is one of the most important developments so far in electronic journals. At Sussex we decided to conduct a small, local user evaluation of the PSLI and certain other electronic journal sites. Since then John Fielden and Colin Harris from the Commonwealth Higher Education Management Service have suggested proposals for a national user evaluation of the PSLI, and Sussex may well also contribute to that.

Description of the research done

Our project was set up as a two-pronged attack:

- to promote to researchers the use of such electronic journals as are available, and
- to evaluate researchers' use of some of those e-journals at Sussex.

In particular the focus has been on:

- The PSLI e-journals; those published by IOPP, Academic and Blackwell Science.
- Researchers at Sussex within the Science Schools.

Both qualitative and quantitative data were to be gathered. So far we have concentrated on the qualitative side of the project and have contacted academic researchers in several different ways, asking them whether they would like to either:

- (i) be shown the PSLI sites, or
- (ii) tell us what they thought of them.

In many ways the response was disappointing. In all I have carried out individual and group interviews/demonstrations with around 30 researchers. Perhaps calling for volunteers was not an effective way of getting a sizeable number of people to participate in this phase of the project, but it was not clear what pressure should be brought to bear on those who would not volunteer

unaided! Besides, I suspect that the apparent lack of interest may be significant in itself.

In one-to-one and group meetings conducted in the researchers offices we then:

- loaded and set up Adobe Acrobat (if necessary);
- demonstrated the PSLI sites (if necessary);
- asked researchers about the sites, and about how they did or would use them;
- administered a questionnaire, not to generate significant quantitative data in its own right, but to gather background details on the researchers interviewed.

Results from the interviews and questionnaire

Background information on researchers contacted: the questionnaire

The researchers who were interviewed varied in their experience on the Internet and in their working practices:

- They all used e-mail extensively to communicate with colleagues across the world, and most of them used the World Wide Web regularly.
- Some researchers were already scanning e-journals to find relevant literature, but more tend to scan print journals or to use BIDS: E-journals were not used frequently.
- When e-journals were used they tended to be used fairly equally by:
 - (i) scanning contents pages, or
 - (ii) keyword searching.
- Unsurprisingly, print journals were seen as very important to research, and e-journals less so.
- E-journals did not seem to be intrinsically unpopular amongst these researchers - only a minority (though a large one) said they would always choose the printed over the electronic version of a journal, although there were strong opinions on both sides.
- In general the researchers interviewed were not sure whether, or not, their field was well represented by e-journals.

The researchers interviewed varied from people who had just started using the WWW to

experienced users of e-journals and other novel forms of information presentation and dissemination. There seemed to be a gulf between those who were happy with computers (installing programs, etc.), and those to whom this was unfamiliar.

Technical issues that emerged during the interviews with researchers

Researchers in the sciences at Sussex have a very wide range of hardware and software in their offices. In the relatively few interviews that I have done, I have come across PCs, Macs and Sun workstations, operating Mac, DOS or OS/2 and Windows 3 or Windows95, or the Sun operating systems. Although all the researchers interviewed were using Netscape as their WWW browser, versions used varied from 1.1 to 3, and Netscape Gold. This technical diversity could explain why only one area of the sciences at Sussex had managed to install Adobe Acrobat on their server in a way that was useful to all researchers in that School.

Even researchers in the sciences could not be assumed to know how to install Acrobat and to set up Netscape preferences. However, with the help of the researchers' knowledge of their own machine, Acrobat has always been installed where this has been required. However, the time and effort needed for these installations suggests to me that there would be considerable costs involved in installing Acrobat on every researcher's machine at Sussex..

Acrobat is a memory-hungry application. On many occasions all other applications had to be closed before Acrobat would launch from within Netscape. On one occasion even this was insufficient, and the .pdf file had to be downloaded to the local machine and read using Acrobat after closing Netscape. Even when the computer was capable of launching Acrobat from within Netscape, the response was slow. Printing .pdf files occupies some computers and printers for a considerable time. The hardware available to many researchers at Sussex is only just sufficient to use the Acrobat reader. It may simply be that Sussex has out-of-date computers, but even if this is true, Sussex is not the only university to have them!

All the researchers contacted said that they would want a printed copy of an article to

study, so that access to printers was an issue. Where such access was no more convenient than access to a photocopier, the advantages of electronic over paper access to a journal were considerably reduced. This was less true in subjects that make use of high quality (photographic resolution) graphics, such as biochemistry.

User evaluation: current practice

All faculty researchers are pressed for time, some so much so that in many cases much of their literature review is done by postdoctoral students. In addition, many experienced researchers scan relatively few key journal titles, knowing that these titles are the core of their specialism. They use the networks of the 'invisible college' (conferences, seminars, personal contacts) to maintain their 'current awareness'. When these practices are transferred to the electronic medium, experienced researchers noted that they might download a paper from a colleague's personal Web page. Although relatively few research students were interviewed, it may be that the emergence of e-journals will have its greatest influence on them, rather than on more established researchers.

User evaluation: The three PSLI sites

General comments relating to the PSLI sites were:

- The available journals were rarely central to the researcher's specialism. It may be that none of the publishers involved happen to publish in the appropriate subjects.
 - Researchers generally do not know or care who publishes the journals in which they are interested. They require either subject (rather than publisher) access, or a user-friendly (on-line?) index of journal titles and their publishers. (This could also serve to alert them to those titles to which Sussex subscribes, and that are therefore available full-text for free from Blackwell's Science.)
 - Researchers are concerned about a perceived problem of the reliable archiving of e-journals. They want a clear, robust and reliable archiving policy established before any irrevocable steps are taken towards abandoning print.
- Academic researchers are generally used to mediating institutions (such as libraries) between themselves and the commercial costs of acquiring scholarly literature. They seem annoyed and distracted by the commercial ('pay-per-article') aspects of some electronic journal sites.
1. *Institute of Physics Publishing:*
- Unfortunately no researchers who might have made use of the titles available from this publisher came forward to be interviewed. It may be that physics is already heavily dependent on the electronic medium in the shape of the Los Alamos PrePrint Archive.
- The researchers' evaluation of the IDEAL (Academic Press) and BIDS JournalsOnline (Blackwell's Science) sites tended to be fairly comparative, since the sites were for many their first examples of on-line journals. They compared the features of the two sites because they had nothing else to compare them with.
2. *Academic Press at the IDEAL site:*
- A major advantage of this site was immediately seen as access to journal titles to which Sussex does not subscribe. Researchers noted the likelihood of significant savings on inter-library requests. A second (and equally important?) consequence of all titles being available full-text is that researchers do not need to worry that they will be unexpectedly asked for money on asking for the full text of a paper. They have confidence to browse or search because they know that they will not have been wasting their time if they come across something worthwhile.
 - The IDEAL site itself was well structured, and researchers navigated through it intuitively. Researchers looking for familiar landmarks were immediately offered recognisable journal titles, and so felt in control. However, there were perhaps too many screens to get through before getting to a full-text article.
 - Given a list of journal titles, researchers could immediately assess the coverage of

the site. The list was split into subject areas, which was useful most of the time. The list was also hypertext, enabling immediate access to a particular title. Given that journal titles are the branded product to which researchers want access, this is highly functional.

- At the time of the research the server seemed unreliable, frequently being unavailable. This gave a very bad impression when I was demonstrating the potential of e-journals. Given researchers' lack of time, and the general slowness of the WWW, this is a major problem that needs resolving.
- There has been a problem with the local direct login facility, which may be a problem specific to Sussex. This is also a significant problem, since researchers do not want to have to remember another set of usernames and passwords.

3. Blackwell Science at the BIDS JournalsOnline site:

- The fact that Sussex researchers only have full-text access to those titles to which Sussex subscribes is inconvenient in two ways:
 - (i) In itself not having full-text access to titles is inconvenient;
 - (ii) Not knowing which titles Sussex subscribes to, and therefore are available, means that there is potential for wasting time searching, browsing and locating papers which are then discovered to be unavailable to Sussex researchers. It would be an improvement if only those titles that were available to Sussex researchers appeared on the screen and were searched.
- The first thing encountered at the BIDS site was a search form. Researchers are looking for familiar brand names, journal titles, and wish to know the coverage of the site in terms of titles before expending their time on what might be a pointless search. A search form is not the best screen to encounter on entering the site.
- There was an option (in small type near the bottom of the opening screen) to go to a list of journal titles covered by the site.

However this list was not hypertext, so that it seemed that individual titles could not be accessed and browsed. Researchers would like e-journals to include (even if they are not limited to) all the functionality of print journals on a shelf, and this includes scanning the contents of individual titles.

- Login using the BIDS username and password was more helpful than having to remember a totally new set, but less useful than direct login, which is surely the best solution.

4. As a comparison to the above, BioMedNet:

In the course of interviewing biologists and biochemists I demonstrated BioMedNet as another major host for e-journals. This site suffered from many of the same problems as the BIDS JournalsOnline Blackwell's Science site, with the additional irritation of overt commercialism (special offers, etc.) being displayed in animations on the screen. As noted above, academic researchers are used to academic discourse being shielded from such commercialism.

Summary of user evaluation of PSLI sites

Researchers expect access to e-journals to be based on journal titles (perhaps organised by subject), rather than being based on publishers. Journal titles are the key unit of quality assurance and brand recognition within academic discourse. Any access to e-journals must reflect this, and should offer keyword searching etc., only after offering access by journal title.

E-journal sites that offer full-text access to only some of the titles shown are confusing and potentially time-wasting for researchers. They confuse the well defined functions of:

- (i) bibliographic tools such as BIDS,
- (ii) contents pages services, and
- (iii) full-text access.

Furthermore, they currently offer no easy way to tell which titles are available full-text and which are not, so that there is no obvious boundary between the three functions noted.

These two problems appear serious to potential service users.

Summary

The group of researchers interviewed used e-mail extensively, the WWW less so, and tended to look to personal contacts, conferences, BIDS and the contents pages of print journals to keep up to date in their field. They used print journals far more than e-journals in the research process. Those interviewed included people adept at setting up computers and people unfamiliar with such work. To the extent that these characteristics are typical of researchers at other institutions besides Sussex, then my findings may be more generally applied.

The computers in the sciences do not conform to any particular hardware or software configuration, since they are being used for widely differing purposes. Installation of Acrobat in these circumstances is not necessarily straightforward (either on servers or on individual machines). There would be significant implications for local support costs, if Acrobat installation was to be comprehensive. Acrobat is software that requires relatively high specification machines, and even then it can be very slow.

So far as the PSLI sites themselves are concerned:

Technical problems, such as the need for a direct login, and server reliability, need to be solved before the PSLI services are fully acceptable to Sussex researchers.

Many researchers feel that there is not sufficient material available yet at the e-journal

sites (either singly or in total) to warrant spending more time on them. Much more material needs to become available before researchers see e-journals as a valuable substitute for print journals, rather than as troublesome extra work for them.

Two particular pieces of knowledge are assumed in the researcher by those e-journal hosts that only offer full-text access to titles to which Sussex subscribes:

- (i) The researcher must know who publishes any title in which they are interested;
- (ii) The researcher must know whether Sussex subscribes to that title.

Neither of these pieces of information are usually known for certain by researchers, and this means that such e-journal host sites can be next to useless.

Researchers are looking for the familiar brand label, the journal title, both as a mark of quality assurance and as a navigational aid in the electronic medium. E-journal host sites that reflect this are easier to use than those which do not.

Researchers are looking to mediating institutions such as the Library to sort out access to e-journals that carries *at least* the functionality and reliability as current shelf access to printed journals, and with the same lack of overt commercialism.