

LIBRARY IN THE DIGITAL AGE EXPERIENCES AND CHALLENGES FROM THE UNIVERSITY OF BERGEN LIBRARY, NORWAY

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Abstract. *At the University of Bergen Library (UBL) the digital library has been developed over a period of 25 years. It started slowly, but during the last decade the changes have been more and more rapid, entailing major alterations of the routines and services. There has also been a revolution in the amount of available digitalized information. I will look briefly at some of the changes and challenges that the University of Bergen Library has been facing during the last 10 - 15 years. The changes regarding a digital library are basically of a technological nature, but they have led to major alterations to all the main library processes. We talk about cultural changes. Consequently the situation has changed radically, both for the library users and for the library staff. Implementing the digital library has entailed both technological and cultural changes. This means that the library, and consequently also the library staff, has had to change its attitude and way of thinking and working to match user demand and to integrate library and information literacy in the education community.. A digital library is very complex and consists of many different things; from the OPAC as well as digital resources (catalogues, books, journals). In my presentation I also would like to emphasize the utility of a consortium for acquisition of electronic resources, and tell you a little about the work with institutional repositories that we have done in Norway. In the book "Aspects of the Digital Library", co-edited by your own Angela Repanovici, and myself and Ane Landøy from UBL, this is explored more fully.¹*

Digital Library System

Our first venture into the digital library was when, in 1980, the board of the University of Bergen decided in 1980 to join a Norwegian library system organisation, named BIBSYS. This is an integrated electronic library system that has since become the common system for all Norwegian institutions of higher education, research libraries, and the National Library. From 1983 all cataloguing in our library has been done electronically. Since then, from 1994-2003, the main card catalogue has been retrospectively converted into the same online catalogue (OPAC). All the main library processes are currently integrated and performed in the BIBSYS electronic library system. This has resulted in more efficient and labour-saving library processes.

The content of the digital library includes data, that data that describe various aspects. The system is based on shared bibliographic information of data and metadata. All libraries have links to or relationships with other data or metadata, whether internal or external to the digital library. Through the digital library more and more electronic resources are made available to patrons. The Internet and web technology have accelerated the development and urge for change.

¹ Games, Kari, Ane Landøy and Angela Repanovici (eds): Aspects of the Digital Library. Laksevåg/BORA 2006, Retrieved from <http://hdl.handle.net/1956/1821>

The number of available resources, resources is constantly growing – digital journals, reference works, databases, and other electronic resources in many different forms, shapes, and formats, including both current and back issues.

As a gateway for accessing all the electronic resources a library portal, Metalib, was introduced at the UBL in 2005.

During all this time, and all these changes, we have cooperated closely with the other Norwegian university libraries.

Consortium for acquisitions of electronic resources

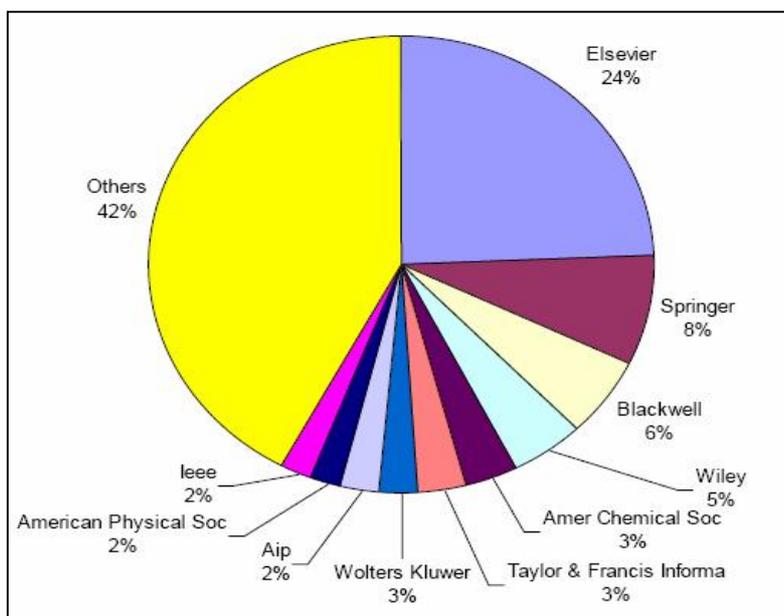
Norway, with its scarcely five million inhabitants is a very small market for the suppliers of electronic resources. Even our biggest university is a midget compared with the big universities in UK and the US. Four university libraries in Norway have for several years been urged by their respective managements to work for a transition from printed journal to exclusively electronic. This transition has both advantages and disadvantages: The users appreciate the facility of access, but are not aware of the costs involved. The libraries become more and more concerned as an increasing part of their budgets are tied up in licensing agreements, while the purchase of printed books is decreasing each year. While the publishers annually charge more for their electronic treasures the libraries' budgets are not increasing at the same pace. At the ULB the costs for access to digital materials increased in 2006 to be higher than access to printed materials. In the year 2006 the digital subscriptions crossed the curve of printed subscriptions. Almost 72 percent of the total acquisition costs are spent on access to digital resources in 2007.

The four university libraries (Oslo, Bergen, Trondheim and Tromsø) established a joint licensing group in 2003. We realized that being university libraries covering practically all subject fields our challenges when it comes to providing electronic resources were quite similar. We have more or less the same major portfolio of journals and databases and we thought that by joining efforts we would form a bigger unit and have greater impact in the process of negotiating licenses to resources.

The licensing group or board has developed and agreed upon a set of requirements for licensing terms, covering all aspects of

- access: who are authorized users, access from outside the campus, access after the possible discontinuation of a license agreement
- technical requirements: metadata for the recourse, user interface, web browser and user support
- use of the resource: interlibrary loan, copying, document delivery and usage statistics

One can discuss to which extent libraries have an impact in licence negotiations with publishers. The development the last 20 to 30 years has been a history of acquisitions and mergers. The large publishers have become publishing giants by buying up smaller publishers and acquiring new titles. Elsevier, which publishes 24% of the worlds STM journals is an example of this. The fact that the



Source: ISI Thomson

journal titles are unique and provided by a single publisher affords the publisher the favourable position of being able to give the libraries an offer they cannot refuse.

In the autumn of 2006 the Norwegian university libraries had negotiations with Blackwell Publishing attempting to set up a new license agreement for access to Blackwell Synergy. After several rounds the university libraries jointly refused Blackwell's final offer in December 2006. This was due partly to unacceptable licensing conditions and partly to the pricing of the product. To turn down a license

agreement with a major publisher is a difficult decision. It is the library's task to provide access to literature, and a breach with a publisher will affect the users. Blackwell Synergy comprises around 800 scientific journals in almost all subject fields. The situation was discussed internally in all four university libraries and between the libraries' directors before the decision to refuse the offer was taken.

The four university libraries in the consortium decided to act as one unit in this situation and prepared joint information to the users through the OPAC, explaining the situation and informing that the libraries would provide free article copies through interlibrary loan. Joint press releases were sent out locally and internationally.

There was subsequently no access to Synergy from Norwegian University libraries from January to March. In March the negotiations were resumed, and we managed to come to terms. The lessons learned from this event:

- our users proved to be very understanding and patient, even though the lack of access hampered their work
- we experienced considerable attention and support from the "library world". It was not as we had feared that a conflict between Norwegian libraries and a publisher would not be noticed. The word spread through the internet at a rapid pace
- very few of our users requested article copies through ILL
- the conclusion: our users are no longer satisfied with paper journals and they preferring the online electronic version
- in our transition from paper to electronic journals we have passed the point of no return
- the importance of acting together as a group or consortium is not to be underestimated

Institutional repositories in Norway

The University of Bergen Library launched the Bergen Open Research Archive (BORA) in November 2004. Two years later, the repository now contains more than 1300 full text documents, mainly peer-reviewed articles, PhD theses and Master's theses. The trend is that new Doctors are happy to deposit their theses, with 50 % submitting their work in 2006. The other three universities also have repositories and two have made submission of PhDs compulsory. From usage statistics we see that the material in the repositories is frequently accessed. The University of Science and Technology in Trondheim reports that the most frequent searches in their repository are from other countries.

The Norwegian university libraries have co-operated on institutional repositories since 2005. In 2006 a joint metadata harvester, NORA, for Norwegian repositories was launched as result of a project with participation from universities and university colleges. NORA (Norwegian Open Research Archives) now harvests nine Norwegian institutional repositories and the number of documents has passed 10.000. The NORA project has also resulted in a common Norwegian metadata model. Reporting research activity is compulsory in Norway through the research assessment systems Frida and Forskdok. In recognition of this the NORA project has provided an import facility from the Norwegian research assessment systems.

What are the challenges for the future?

Numerous papers are dealing with "the library of the future". From UBL point of view I shall mention some aspects.

With the development of modern technology and today's information society, strong commercial and other interests have entered an arena which used to 'belong' more or less exclusively to the libraries. The library sector is therefore faced with an unaccustomed form of competition. Internet and web technology develop independently from the thoughts or actions of libraries and librarians. The digital library must be built up as an integrated part of the higher education learning environment.

- Collaboration between library and academic staff is an essential requirement for successful embedded digital content and information literacy education
- Education in information literacy must be integrated as a part of the student education program and give credit points to the students

Contextual information is more than records and documents in the library. We are also managing the institution's intellectual capital. Digitalisation of unique and valuable collections in order to make them available to the general public and accessed from a general search engine (OPAC) should be highly prioritised. To achieve our goals in this field the library must focus on efficiency, *e.g.* by using systematic performance measurement and developing further systems of library quality control.

The library is an integrated part of the scientific publication cycle and should work actively to change the system for scholarly publishing by *i.e.* organising effective systems for electronic research registration and publication, such as institutional repositories and other open access archives. The institution's PhD and master's thesis should be included here.

The users often start their searches from a general search engine (like Google), and not from a library portal.² This fact raises an important question for modern library management:

- Should licensed electronic resources be managed outside the library catalogue (OPAC) and this exclusive be used to catalogue the library's printed collections and manage acquisitions, loans (also ILL) and circulation of printed material? Other resources would then be managed from other systems, in the library or outside.

Another major challenge is: How are we going to make the library staff skilled for work in the library of the digital age?

- The staff will have to be continually educated, to ensure that they have the skills and qualifications needed for understanding users, users and flexibility in performing their duties
- Computer literacy among the staff must be at a sufficiently high to be able to help and guide library users

² As shown in many studies, *e.g.* "Perceptions of Libraries and Information Resources" from OCLC 2006