MAKING INFORMATION AVAILABLE

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Contents

Summary

This article presents an overview of activities that are carried out in libraries and information centers to make information available to readers and users of information sources. The previous article by the same author discusses how to find information and that forms a good basis for this one that is focusing less on information users but more on information professionals.

Typical activities in libraries and information centers include collection development, cataloguing information sources, organizing information sources for more efficient access by using classification and thesaurus systems, providing reference services, interlibrary co-operation including interlibrary lending, orientating and educating users and potential users in the field of information access, and marketing information products and services. Besides those typical activities, we see also more general activities like creating documents, managing personnel, communicating with higher management, and continuing professional development.

Due to the rapid evolution and implementation of information and communication technology (ICT) in general, libraries and information centers are more and more involved in applying ICT to make their activities more efficient. For instance, they create databases, make information available through the Internet, create web sites, retrieve information through the Internet, and provide access to Internet workstations. The distinction between managing data and information is not sharp. Nevertheless, here we do not focus on numerical data (like for instance hydrometrical data in hydrology), but on information stored in documents.

1. Introduction

Acquiring, transferring, using and exploiting scientific and technical data, information, documents, and knowledge is vital for progress in economy, science, and society in general. After the article on finding information, this article presents an overview of activities that are carried out in libraries, information and documentation centers by information professionals, to make information available to readers, users of information sources. Ideally these information professionals should combine skills and knowledge related to “information” and information and communication technology, with expertise in the topic, the subject domain of the “contents” of the particular information sources.

2. Relations with Other Articles of this Encyclopedia

The author of this article has also written the preceding article on "Finding information", so that there are relations between both articles. The preceding article focuses on the users of information and tries to guide these users and potential users to an efficient usage of information sources. This article on providing information focuses more on how information professionals can assist users of information by guiding these to information and by providing access to information. The article on finding information comes first, because the contents should be mastered by anyone, not only by information professionals or providers of access to information, but also by users of information. This article on providing access to information builds on the preceding one and goes further by discussing aspects that should be mastered ideally by information professionals, but not necessarily by all users of information.

3. Variations on the Theme of "Information Centers"

Many kinds of organizations focus on providing access to information. For instance, there are organizations that are named

--libraries,
--archives,
--information centers / units / services / departments,
--documentation centers / units / services / departments.

The distinction among these is not sharp.

They can operate centralized or decentralized and on a local, national, regional or international scale.

4. Activities of Information Centers: an Overview

Here an overview is presented first; afterwards, some of the topics receive more attention.

The typical activities of information centers aim at providing access to information. We can distinguish the following activities:

--Development of a local, physical collection of documents and arranging licenses to access information online.
--Storage, organization and conservation/preservation of collected hard-copy documents; cataloguing of documents; classifying documents, adding subject terms to document descriptions, to improve retrieval of documents from the collection. Managing the circulation of materials. (An online integrated library management system can be useful here.)
--Providing access to information that is locally stored on hard disks of computers, on CD-ROMs or on DVD.
--Providing computers to access online information sources.
--Setting up a web site on the Internet as a gateway to the available information. Integrating the access to information sources in various formats, which leads to a hybrid library.
--Providing current awareness services to users.
--Training users and potential users of information sources in finding and managing information.
--Collaboration with related institutes.

Many activities can be seen in many organizations, not only in those focusing on providing access to information. For instance:

--Space planning
--Managing staff
--Applying common, general, horizontal information and communication technology (ICT)
--Marketing, promotion, public relations
--Maintaining good links with senior, higher management
--Disaster planning
--Continuous professional development.

5. Access to the Services Provided by Information Centers

Information centers can be accessible by the public to varying degrees:

--Is the catalogue accessible locally, on CD-ROM, or through the Internet?
--Are the materials accessible for local consultation?
--Are loans allowed?
--Is interlibrary lending possible?
Great variations exist in the prices that are charged for these services. The accessibility and prices can depend on the type of users (internal or external users for instance).

6. Collection Development in Information Centers

We can distinguish two classes of activities in collection development:

--Classical, traditional acquisitions of documents in hard copy or on CD-ROM or DVD for local storage (and in many cases conservation) and of course for usage.
--Relatively recent activities related to licensing access to information available on CD-ROM or DVD or online through the Internet.

The trend away from buying information towards licensing to access computer-based information suffers from a disadvantage: more computer equipment, programs and networks and skilled operators must be available; on the other hand, we see many advantages such as a decrease in the costs of storing physical documents, and better accessibility of information, almost continuously and from many places.

7. Assessing the Impact of Scientific Journals

One component of collection development is providing access to scientific journals. This is an important activity in scientific information centers. Unfortunately access to journals can take a considerable part of the budget of an organization. Therefore, selecting or deselecting journals is a task that requires some decision support. Information managers are interested in assessing the influence, the impact, the importance, the usefulness, and the prestige of particular scientific journals. Furthermore, assessing the impact of journals is also useful for the following reasons:

--Scientific authors need to select journals to publish their articles.
--Science and personnel management requires assessment of the influence of a scientific author; indirectly, they can more easily assess the influence of the journals publishing his/her articles.

Therefore a few methods in this area deserve to be mentioned:

--Relying on the opinion of experts and users;
--Measurement of usage frequency: observations of usage of journals in hard copy, or investigation of automatically collected usage statistics of electronic versions of journals
--Relying on indicators based on citation analysis, published in Journal Citation

Reports, produced by the Institute for Scientific Information (ISI).

The most important of these indicators are the number of received citations during one year, and the Impact Factor. The Impact Factor by ISI of a journal in a particular year is the number of citations found by ISI in that year to articles published in that journal in the previous 2 years, divided by the number of articles published in that journal in the same 2 years. In this way the Impact factor gives an idea of the importance of the average article in a particular journal.
The indicators have been published by ISI in print with the ISI Citation Indexes, on microfiche, on CD-ROM since 1996, and through the WWW since 1999. They provide, in many cases, a view that is more objective than the opinion of experts. They are easy and cheap to use, and widely used.

However, some shortcomings of indicators like the Impact Factor should not be neglected:

--The Impact Factor has a bias favoring journals in scientific fields with a short half-life period of citation, and in which journal articles are often cited in other articles.
--Only for about 4000 journals a value is listed by the ISI, while many others also have non-zero value.
--Citation data in the ISI database are not completely free of errors.
--The value observed for a journal can fluctuate significantly from year to year.
--The meaning of the Impact Factor is not well understood by many decision makers or policy makers.

8. Organizing Access to Information in Information Centers

8.1. Introduction

How to organize access depends of course on the type of information source. So we see:

--Activities concerning collected hard-copy documents;
--Providing access to online computer-based information sources.

Also the information center should try to integrate access to all types of information as far as possible in a so-called “hybrid library”.

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Biographical Sketch

Paul Nieuwenhuysen received the degrees of Licentiaat in Physics in 1974, Doctor in Science in 1979, the Belgian post-doctoral degree of Geaggregeerde voor het Hoger Onderwijs in 1983, and the inter-university postgraduate degree in Documentation and library science in 1986.

Since 1983, Paul Nieuwenhuysen has been a full-time member of the academic staff at the Vrije Universiteit Brussel, nowadays as professor. He is head of the information and documentation department, and science and technology librarian, both in the framework of the University Library, as well as teaching courses on information retrieval.

At the inter-university postgraduate program in Information and Library Science of the Universitaire Instelling Antwerpen, he is guest professor responsible for courses on information technology and on the information market. He has organized international training courses on management of information in science and technology. In the domain of information science, he is a member of several societies and of the editorial board of four journals, and he has worked for various international agencies (including UNESCO-PGI, UNESCO-IHP, UNESCO-IOC, UNESCO-MAB, and UNDP).