

THE ROLE OF INFORMATION RESOURCES IN THE FLOW OF INFORMATION

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Abstract.--The flow of information from its source to application is known as technology transfer. The success with which the flow of published information takes place depends largely on accessibility and dissemination of that material. Three information resources that affect this process are: 1.) the generators - those who generate publications 2.) the manager - those who make information accessible 3.) the facilitators - those who disseminate information. Knowledge of the way these resources interrelate can enhance the flow of information and speed of technology transfer.

Keywords: Technology transfer, information storage and retrieval.

There is significant concern in forestry and other scientific and technical disciplines about the flow of information from its source to its application -- a process also known as technology transfer. Many studies have been done to determine the best channels through which this process should occur, but one channel consistently mentioned is the use of published information. The flow of this information depends on accessibility and dissemination. Knowledge and understanding of the factors affecting each segment of the process can improve the information flow and achieve the goal of successful technology transfer.

This paper addresses three information resources and explains the interrelationships among them that affect the flow of information. Those three resources are:

1. The generators -- The writers and the publishers of information.
2. The managers -- Those who make information accessible by the use of computerized databases, abstracting and indexing services, and library catalogs.
3. The facilitators -- Those who disseminate information such as libraries and information services.

The examples for each resource can probably be expanded, but the influencing factors that link them should be consistently applicable. You can describe the flow of information within these resources as a linear progression from generator to manager to facilitator to user; however, there are factors between and among them that influence the flow.

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The Generator to the Manager

Information may be published in a journal, a trade publication, an organization's series publication (for example, a Forest Service Research Note), or a conference proceedings. Each of these outlets has a fairly predictable circulation and will probably get to most of the desired audience. For current awareness in a specific subject area, this process works quite well, but most things we read are not immediately applicable and there is little likelihood that cross-disciplines are thoroughly examined. Therefore, information about that publication must be retrievable at a later time. It is the responsibility of the generator to make sure that happens.

There are two aspects to the generator's responsibilities -- description and dissemination. The description of a publication is extremely important to the management of its bibliographic information. Because retrieval of information depends on the consistency with which it is processed, standards of bibliographic description have been devised for library catalogs and for other databases. The description of a publication is normally based on physical inspection of the work. Wizen information on a publication is inconsistent and/or incomplete, it becomes a cataloger's nightmare. With the huge amount of literature that must be managed, difficult-to-describe publications may not be selected for the library or database collection, or may be set aside as a problem to be handled later. Either way, such publications are kept out of the mainstream of managed information. Also many databases heavily depend on the words in the title for retrieval by subject. For these reasons, it is important for authors to help assure the continuation of the information flow by heeding the following factors:

1. Use descriptive titles for all publications. Avoid being nebulous or facieciosus.
2. Make sure that the title page contains author, title, publisher, place and date of publication, and series. Conference proceedings are particularly subject to inconsistencies because they are often published by different sponsors each year. The governing body of the organization or conference should take responsibility to establish a format for the title page of its publication.
3. If the work is to be published serially, such as annual conference proceedings, research note series, or other numbered works, establish a series title to be used on every publication within the series. If changes in the series title are necessary (i.e., the name of the organization changes), add a note on the title page or on the verso of the title page explaining the change.

The second aspect of the generator's responsibilities is dissemination. Selections for databases or library collections depend on awareness that the publication exists. Most sci/tech journals are indexed by one or more databases but for highly specialized or smaller serials there is a chance that the title is not regularly indexed by any database. Again, the governing boards of organizations might take the responsibility for finding out which of the publications in the field are indexed and where. If the generator of a publication wants it to be retrievable, he/she should take responsibility for sending the publication to an information management resource. For nursery information, the two logical resources would be the National Agricultural Library (NAL), which is responsible for AGRICOLA, and SOUTHFORNET. Those two databases contribute selections for the Forest Service Union Library Catalog (FSLC). Thus, NAL and SOUTHFORNET

would ensure both national and regional dissemination of the publication.

Another aspect of dissemination has a more direct effect on the facilitator than the manager. That is the responsibility of the generator to correctly cite and verify all references to other publications. These references are a vital part of the information being disseminated. Incorrect information can make retrieval of those resources extremely difficult for the facilitator or the user.

The Manager to the Facilitator

The management of information has traditionally been the chore of libraries, but the advent of computer technology has changed that function. In the 60's, librarians and information specialists became acutely aware of the phenomenon called the information explosion. Coincidentally, developments in computer technology were taking place. The need for expanded bibliographic control and rapid retrieval of information resulted in the appearance of computerized bibliographic databases in the early 1970's. As a result several changes have taken place in traditional information resources:

1. A need was established for a person to act as an interface between the computer and the information user.
2. Highly individualized service could be made available to the information user.
3. Individualized service made it easier to individualize the cost of services, thus user fees could be established.
4. Increased awareness of available information increased the demand for information.

Because of the use of computer technology to manage bibliographic information, libraries have been forced to expand their services, charge fees for services, or view computer technology as something too expensive for the needs of their clientele. Libraries have the responsibility for development and management of a collection as well as service and must balance funds between the collection and services it offers. As a result of high demand for information, increased realization of its value, and the need for an interface to retrieve it, information services have been established. Without an obligation to collection development, they can emphasize service and active dissemination of information with very little demand on the user.

Studies have found that convenience appears to be more important than anything else in determining the use of information channels. Also, both frequency and priority of use are governed by accessibility. Two distinct advantages of information services are convenience and access. Facilitators can employ these advantages to encourage the flow of information to the user.

There is no doubt that the next step is direct retrieval of computerized information by the end user. This access should further stimulate the flow of information and create new challenges for information managers. In the interim, information services such as SOUTHFORNET are augmenting the flow of forestry information to the user and assisting in the process of technology transfer.

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