ABSTRACT
        Conducting library research is a complex procedure
that relies not only upon the knowledge of basic reference sources,
but also upon an appreciation of the process of literature searching.
Writing teachers can provide their students with models of the
research process to guide them in their quests for information.
Search strategy outlines map the path one should follow in the course
of a literature review, progressing from the collection of background
information to the identification of specific literature, and can be
modified from one discipline to another. Mastery of the search
process enables students to develop understanding of the context of
their topics within disciplines and to refine their topics
appropriately. Many colleges are integrating library instruction in
cross curriculum programs with apparent success. Such programs
require planning of objectives and consultation with faculty outside
the library. Library instruction should be provided only for those
parts of a writing curriculum that require research, and serious
thought should be given to the library's ability to support its
proposed activities. In an alternative approach, libraries could
function as centers for faculty development training of peer tutors,
who could instruct students in the use of search strategies and ways
in which different disciplines organize their literature. (Appendixes
contain search strategies and a bibliography of sources on
intergrated library instruction.) (HTH)

THE SECOND KIND OF KNOWLEDGE:

THE ROLE OF LIBRARY INSTRUCTION IN

WRITING ACROSS THE CURRICULUM

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"Knowledge is of two kinds; we know a subject ourselves,
or we know where we can find information upon it."

Samuel Johnson, 1775

Samuel Johnson's remark is often applied to libraries and to the importance of being able to locate information. Today, most librarians would prefer that Johnson had used the word "how" in his comment rather than "where." Library research is a complex procedure which relies not only upon the knowledge of basic reference sources; but also, upon an appreciation of the process of literature searching. The exponential increase in the rate of information production has had its impact on the means used to access this material. Traditional types of tools have grown in number, size, and complexity, and some have changed their formats drastically (for example, computer data-bases). Innovative systems, such as citation indexes, represent new approaches to accessing information. In this era of "information explosion" students, teachers, librarians, and other library users will need to rely more heavily on methods of finding information rather than on mastery of individual sources.

Although the research process is as difficult to define as the writing process, we can provide students with models of the system to guide them in their quests for information. Search strategies (Appendix I) are convenient aids to use as models of this process. These strategies are used to map the path one should follow in the course of a literature review, progressing from the collection of background information to the identification of specific literature. This sequence (general to specific) remains constant, but as one moves from one discipline to another the model is modified by determining the names of particular sources or types of sources.

The process approach to library instruction can be used in conjunction with a variety of information-dependent activities such as: legal research, statistics, government documents (which, by the way, include some interesting information for humanists as well as social scientists and scientists), book reviews, literary criticism, debates, and, of course, term papers. Depending upon the information needed and the student's familiarity with the topic, he can construct a search strategy, plug into it at the appropriate level, and proceed from there.

Inexperienced students need to be provided with well-developed search strategies to follow for their research assignments. As they become familiar with the organization of information in different fields and gain an understanding of the process involved, they can begin to develop and use their own strategies. The beauty of the process approach to information gathering lies in the fact that searchers who are well versed in research methods can exploit a variety of information sources from a variety of disciplines.

Mastery of the process of library research can provide students with much more than well documented pieces of writing. It enables them to develop understanding of the context of their topics within disciplines and to refine their topics appropriately. For instance, the student who wants to write a short paper on euthanasia will learn from consulting background sources (encyclopedias, books, etc.) that his topic is too broad and that he must determine a specific focus. His background investigation makes him aware that he could approach the issue from several different angles (see Appendix I-B). He may decide to investigate the Roman Catholic Church's stance on euthanasia, the economic implications of mercy killing, or the controversy

over the concept of brain death. In any event, his initial search has been useful in helping him to understand the scope of the issue and to define his thesis.

Students who understand the process of library research become aware of the organization of literature in various disciplines as well as their special vocabularies and particular processes of scholarship. In some endeavors the research process can teach students the workings of another system. For example, the student who traces the history of a bill develops a working knowledge of our legislative system.

The teaching of writing and library instruction traditionally have been handled in much the same manner. Students were (and, in too many cases, still are) assigned projects which required them both to write and perform literature searches but were given little or no instruction on how to perform either task. They were expected to have already mastered these processes or to be able to acquire the necessary knowledge along the way. Of course, all too often students failed to master these processes, the results being poorly written and researched papers, disgruntled professors, and discouraged students.

In an attempt to remedy the problems of student writing and research, many English departments and libraries instituted instruction in basic skills. Although such attempts were well intended, the lack of attention to process and the emphasis on mechanical skills (grammar, punctuation, and spelling in the case of writing instruction; card catalog and periodical index use in library instruction) divorced from content materials did not contribute to significant improvement in student writing and research. There was little transfer of the material taught using such approaches to other courses.

Programs at Beaver College, University of Michigan, and the University of Maryland which teach writing as a process with reinforcement across the curriculum have their counterparts in the area of library instruction. At Earlham College instruction in library research is provided at carefully planned points throughout major areas of study (biology, sociology, etc.). The program exposes students to increasingly complex components of the research process as they proceed through their college majors.

Other institutions, such as St. Lawrence University and the College of Charleston, have taken advantage of existing courses in library use by clustering sections of these courses with content courses. St. Lawrence's program, BASK (Basic Academic Skills), integrates English, logic, and library courses. The logic unit aids students in the construction and evaluation of arguments, the library component helps them to find information to either support or refute arguments, and the English course teaches them how to effectively communicate their arguments to others. The FAR (Freshman Abstract Reasoning) program at the College of Charleston integrates freshman sections of courses in physics, mathematics, sociology, economics, and library use. Pedagogical techniques designed to develop the critical reasoning abilities of students are used in the courses in this program.

While the course clusters are still too new to provide empirical evaluation, overall impressions have been encouraging. The Earlham program is particularly successful and serves as a model for many library instruction programs (each year Earlham sponsors workshops on library instruction and encourages institutions to send both library and non-library faculty). The success of these programs is credited to their concentration on the process of research, the relevance of library instruction to content courses,

and the reinforcement of the process across the curriculum.

As one can see, the similarities between the teaching of writing and library instruction are many. Both are processes which involve problem solving and discovery and help students to focus topics and place material in context. Writing and library research can also be used to expose students to the types of scholarship practiced in certain disciplines. These similarities are more than coincidental. Libraries traditionally have served as essential components of humanistic study and will continue to fulfill this function (regardless of whether the library of the future contains printed materials, computer databases, or video discs). The link between writing and library research is so strong that it is difficult to determine when the research process ends and the writing process begins.

It is on the basis of this intimate link between writing and research that I advocate the inclusion of library instruction in cross-curricular writing programs. To be responsible members of society and lifelong scholars, students must be able to communicate effectively. This communication requires them to collect, analyze, and transmit information. Faculty in all areas of students' curricula must cooperate to help students develop such capabilities.

The incorporation of library instruction with writing programs requires planning above all. Too often, librarians have launched instruction programs without defining their objectives clearly and without consulting faculty outside the library. Such attempts have frequently resulted in frustrating programs in which librarians did not understand the needs and objectives of students and faculty, who, in turn, continued to struggle with library research because they could not see the relevance of the instruction to their endeavors.

Library instruction should be provided only for those parts of a
writing curriculum which require research. Such components should stress
the use of search strategies, illustrate the organization of literature
in disciplines, and be constructed in a manner that underlines the relevance
between library presentations and content courses. To achieve such a
situation classroom faculty must communicate their objectives clearly to
librarians, and librarians must be receptive to these needs and innovative
in developing units or in aiding faculty to develop units to meet such goals.

When planning library instruction in cross-curricular writing programs,
serious thought should be given to the ability of the library to support
the activities proposed. Schools have two options which may be employed in
the implementation of such programs. The first option would center the
responsibility for library instruction in the library itself. Such a decision
would require that institutions designate instruction as a priority for
librarians. Administrators, faculty, and students would have to accept
less emphasis in non-instructional library concerns (e.g. especially
administrative and managerial tasks) in exchange for more active library
involvement in the educational process. Librarians would then be free to
offer full-fledged library courses (either grounded in content area or clustered
with other courses) and/or to provide units in research methods for individual
courses, term paper clinics, and tutorial services.

The alternative approach would decentralize the responsibility for
library instruction, and libraries would function as centers for faculty development
training of peer tutors, development of instructional materials, and referral
of special problems. With proper orientation, faculty could instruct students
in the use of search strategies and the ways different disciplines organize

their literatures. Librarians could provide the necessary orientation in faculty workshops (perhaps, as parts of writing across the curriculum workshops) and make themselves available for consultation on specific problems and guest lectures on complicated information systems (e.g. government documents). Well developed guides for the use of specific library tools, specialized bibliographies for each discipline, and trained peer tutors (perhaps writing tutors) could be relied on to provide instruction in locational skills.

Each option has its strengths and weaknesses. Although centralizing responsibility for research instruction in the library would not require the attitudinal change necessary to implement the decentralized approach, political and administrative decisions would be required. Students exposed to library centered programs would have the benefit of instruction by professionals who are specially trained in information science, while those in programs of the second type would receive instruction from faculty who are accustomed to using information in specific disciplines.

Just as there is no one writing program which is best for every school, there is no magic formula to determine which direction an institution's library instruction should follow. The shape of a writing program's library component should be determined by the character of each institution. The nature of the writing program, the goals and objectives of students, faculty, librarians, and administrators, and the level of library staffing at a school should be considered when planning the role the library will play in the program.

To facilitate this planning, librarians and other faculty must work together. Librarians should be represented on writing councils (ideally as

members, if not, then as observers) and non-library faculty should be invited
to participate in library committees charged with implementing instruction
programs. Faculty development workshops represent yet another area for co-
operation between libraries and writing programs. Librarians could participate
in workshops by presenting units on teaching the research process, or they
could attend these sessions to learn means of incorporating writing into
their own instruction.

The interest in writing programs which is being shown throughout the
educational community is an encouraging sign for us all. Professionals from
diverse fields are coming together to devise means to prepare students to
deal with our increasingly complex society. Since information is already a
vital commodity in our society, instruction in its use is necessary to achieve
this.

Our students can be information rich or information poor; the decision
is ours. The critical thinking abilities which we hope to help students
develop through our writing programs are the domain of the information rich.
The responsibility for our students' status in the information society rests
on all educators. We must cooperate to assure that our students will be
among the information rich.

APPENDIX I - SEARCH STRATEGIES

I-A. A general search strategy

DETERMINE SOURCES IN AREA OF INTEREST

Consult: Guides to the literature ·
          Librarians
          Professors
          Colleagues

List titles

↓

COLLECT BACKGROUND INFORMATION

Consult: Encyclopedias
          Dictionaries
          Books (especially textbooks)
          Reviews
List useful citations and make notes on the
    coverage of your topic.

↓

REFINE YOUR TOPIC
    Review the information you have located.
    Determine if the scope of your topic is appropriate
        given your assignment and available materials.
        If your topic is too broad, focus it by placing
        limits on it, investigating a subfield, etc.
        If your topic is too narrow, expand it to include
    · treatments in related disciplines, related
        aspects, etc.
    Write your topic as a coherent paragraph.

↓

COLLECT SPECIFIC INFORMATION

Consult: Periodical indexes and abstracts
          Bibliographies
          Statistical compilations etc.
List citations.

I-B A search strategy constructed for students writing papers on euthanasia.

DETERMINE SOURCES

> Consult: Bibliography prepared by librarian
> Librarians
> Professor
> Peers

↓

COLLECT BACKGROUND INFORMATION

> Consult: <u>Encyclopedia Americana</u>
> <u>Encyclopedia of Bioethics</u>
> <u>Encyclopedia Britannica</u>
> <u>New Catholic Encyclopedia</u>
> Card catalog
> etc.
>
> List useful citations and make notes on the ways
> different sources covered your topic.

↓

REFINE YOUR TOPIC

> <u>Review</u> the information you have located.
> Euthanasia is <u>too broad</u> a topic for your
> assignment. Use your background information
> to select one aspect of the issue and research
> that.
> Write your refined topic as a coherent paragraph.

↓

COLLECT SPECIFIC INFORMATION

> Consult: Periodical indexes and abstracts from
> the appropriate field. For example,
> if you are investigating the Catholic
> Church's stance on euthanasia consult
> the <u>Index to Religious Periodicals</u>.
> If you are interested in the controversy
> in the medical field over brain death
> consult the <u>Bibliography of Bioethics</u>.
>
> List citations.

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APPENDIX II - A SELECTIVE BIBLIOGRAPHY ON CURRICULUM - INTEGRATED
LIBRARY INSTRUCTION

Biggs, M.   Proposal for course related library instruction.
            School Library Journal, 1980, 26, 34-37.

            Provides suggestions for library instruction at the
            high school level.

Current library use instruction. Library Trends, 1980, 29(1).

            The summer, 1980 issue of Library Trends is devoted
            entirely to the subject of library instruction. Articles
            dealing with the history of library instruction, the
            theories surrounding it, present practices, and projections
            for the future are included.

Gwinn, N.E.   Faculty-library connection. Change, 1978, 10, 19-21.

            Reviews a number of library instruction programs which
            have been developed through the cooperation of faculty
            and librarians.

Lubans, J.   Educating the Library User. New York: Bowker, 1974.

            An excellent collection of articles on library
            instruction.

Pearson, L. Curriculum-integrated library instruction. Liberal
            Education, 1980, 66, 402-409.

            Presents a plan for a cross-curricular library instruction
            program.

Woolpy, J.H. Information retrieval for introductory science
            courses. American Biology Teacher, 1977, 39, 162-164.

            A biology professor from Earlham College describes the
            first level of library instruction in the biology program.