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## Course Integrated and Related Bibliographic Instruction: A Study of Effects on College Students' Academic Indicators

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COURSE INTEGRATED AND RELATED BIBLIOGRAPHIC INSTRUCTION:  
A STUDY OF EFFECTS ON COLLEGE STUDENTS'  
ACADEMIC INDICATORS

by

Larry A. Miller

A Dissertation Submitted to the Faculty of the Graduate School of Education  
of Loyola University of Chicago in Partial Fulfillment  
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Doctor of Education

January, 1983

Larry A. Miller

Loyola University of Chicago

COURSE INTEGRATED AND RELATED BIBLIOGRAPHIC INSTRUCTION:

A STUDY OF EFFECTS ON COLLEGE STUDENTS'

ACADEMIC INDICATORS

This experimental study compares the effects of course-integrated and related bibliographic instruction versus traditional library instruction given in freshman English classes. Those areas examined were pre- and post-test scores on the Library Inventory Test, grade point average in Communications (English) 101, semester grade point average, and enrollment retention.

In order to make the comparison of these two methodologies, sections of Communications (English) 101 were randomly chosen and divided into a control and an experimental group. The control group received a pre-test of library skills, and the traditional library instruction was presented by the English teacher just weeks prior to the term paper due date. The experimental group also took the pre-test of library skills, but was exposed to a specially designed bibliographic instruction program of eight units. These units were interspersed between assigned papers. Both groups were given a post-test of library skills.

The study indicates that students in the experimental group did better on post-test scores on the Library Inventory Test than those in the control group. Based upon pre- and post-test scores (although both groups showed gains) the most gains in library instruction are made through the course-integrated library instructional approach.

Although the experimental group learned more library skills, the two groups did not have a statistically significant difference in course grade point, semester grade point, or attrition rate. This appears to indicate that, over time, the control group did as well as students exposed to the integrated instruction.

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## VITA

The author, Larry Alan Miller, is the son of Lou Bob Miller and Barbara (Tomlonson) Miller. He was born August 12, 1950.

His elementary education was obtained in the public schools of Calumet City, Illinois. He attended Thornridge High School, Dolton, Illinois, and North College Hill High School, Cincinnati, Ohio, and was graduated from the latter in June, 1968.

In September, 1968, he entered Eastern Illinois University and in February, 1972, he received the degree of Bachelor of Art with a major in English. He also received his teacher certification for grades 6-12. He began his graduate studies at Eastern Illinois University and concluded them at the University of Illinois at Champaign-Urbana where he was conferred the Master of Science with a major in Library Science in June, 1973.

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Publications by Mr. Miller include: Library Instruction Programs in Illinois Community College Learning Resources Centers: A Directory and Survey Report, Illinois Library Association, 1979; co-authored "Library

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compiler, Vocational-Technical Audiovisual Materials for Learning  
Resources Centers, American Library Association (Choice), 1981;  
co-author, "Bibliographic Instruction at Moraine Valley Community  
College: A Position Paper," ERIC, 1983.

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## CHAPTER I

### INTRODUCTION

The purpose of this study is to investigate the effects of course-integrated bibliographic instruction on the academic and research performance of community college students. These students were compared with students given traditional instruction on how to use the library just prior to doing a research paper. The students were selected from community college Communications (English) 101 sections. The library instruction was given by the English teachers themselves.

This introduction concerns itself with what bibliographic instruction is, how it was used, and how it was integrated into a 17-week course. Additionally, a description of the community college, the student body, and the course is given. By using a typical community college for this study, some useful results could be applied to similar situations.

One type of bibliographic instruction was introduced at the Montieth College and has been described at length in Patricia Knapp's book, The Montieth College Library Experiment. This book has been the impetus for many librarians to seek money to conduct what Knapp called "library instruction." This instruction often took and continues to take the form of a separate course on the library, a workshop, or even a one-hour lecture on finding materials in a library. At times, this instruction really amounts to little more than an orientation to facilities. Unfortunately, what is taught usually cannot be carried over to another library or other informational needs. Bibliographic instruction,

different from library instruction, is an approach which teaches skills that are valuable in any informational center and on any informational need. Rather than teach the student how to use The Reader's Guide to Periodical Literature, the index might be used as an example of a periodical index and how it is used in finding information. The emphasis is on what an index does, when it should be used, and how it fits into an informational search strategy. By calling the approach used in this study bibliographic instruction rather than library instruction, this is not merely a case of semantics. Rather, it is an indication of a perception of a systematic structure of knowledge common to every discipline. This structure should be known and used by every student.

The question can and should be asked, "Why give bibliographic instruction to students?" The Carnegie Commission on Higher Education is clear on the answer to this question. In the Commission's book, Reform on Campus, it makes this affirmation:

Knowledge has increased enormously. The new wealth of knowledge means not only that no person can possibly comprehend it all, but also that it can hardly be widely sampled during a student's career. A problem thus arises over what an educated person can and should know about society and self, and how best to make this knowledge available. The teaching of existing knowledge, in any event, becomes comparatively less essential to the task of higher education and the imparting of skills for continuing self-education comparatively more, particularly an independent study and through the library.<sup>1</sup>

[author's emphasis added]

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<sup>1</sup>Carnegie Commission on Higher Education, Reform on Campus: Changing Students, Changing Academic Programs (New York: McGraw-Hill, 1972), pp. 23-24.

The imparting of these skills is the basic emphasis of this study. Central to this concept is the teaching of the skills in small units at the time of greatest need to the student. The need is greatest when papers have been assigned. The student will be more attentive to the discussion of bibliographic instruction if it is presented at a time when the need for help is very real. The students know the paper has to be done, and are given relevant information which can make the task easier. If the information is given at a time other than when a need exists, perhaps at the beginning of the semester, the student will say, "So, who cares?" and proceeds to forget what has been said. Students at a community college who feel this way are really no different than students at any other college, or for that matter, people in general.

The students chosen for this study are attending a public community college. It is one of the 35 public two-year colleges in Illinois. The college is located in a suburb of Chicago. Curricular offerings include those leading to the degrees of Associate in Arts (the traditional transfer program), Associate in Science, and Associate in Applied Sciences. In addition to degree programs, the college offers vocational-technical certificates, general adult education, and various community workshops and courses.

The student population enrolled in both credit and non-credit courses was 10,917 for the fall, 1980. This figure becomes a full-time equivalent of 5,461.45. The average student is 28 years of age. Yet, the largest percentage of the student body, 32 percent, falls between the ages of 19-26. This is not atypical of the community college student body.

The students in this study were those enrolled in COM (English) 101. It is the first writing course and is transferable to upper-level colleges and universities. The course lasts 17 weeks and meets 150 minutes per week. These meetings took the form of three 50-minute or two 75-minute classes per week.

Evaluation of the students' progress in these classes was done by examining their course grade, semester grade point average (G.P.A.), and pre- and post-library test scores. Additionally, a questionnaire was sent to those students who completed the course in order to obtain their opinion of the library instruction unit. Enrollment retention for the succeeding semester was also examined.

In summary, this study looked at academic and research performance of community college students. The students were those enrolled in the first credit-transferable writing course, COM 101. The academic indicators of students in course-integrated bibliographic instruction were compared with those of students in traditional library instruction. Those areas of evaluation included mean grade point for COM 101, overall semester G.P.A., enrollment retention rate, mean score from library pre- and post-tests, and students' evaluation of the library and bibliographic instruction. The setting was in a typical community college in an urbanized area.

## CHAPTER II

### REVIEW OF RELATED LITERATURE

Library instruction is a concept of service which has been discussed for a long time. One early example of such instruction was the introduction of reference services in academic libraries in the late 1880's.<sup>2</sup> A corollary to that idea is librarians giving instruction to students; this idea, too, has been around for some time. As early as 1902, then President of the University of Chicago, William Rainey Harper, advocated librarians' leadership in instruction and said:

The equipment of the library will not be finished until it shall have upon its staff men and women whose entire work shall be, not the care of books, not the cataloging [sic] of books, but the giving of instruction concerning their use.<sup>3</sup>

Much has been written about giving library instruction since that time as well. Several comprehensive books,<sup>4,5,6</sup> two major

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<sup>2</sup>Stuart Miller, Library Use Instruction in Selected American Colleges (Champaign: University of Illinois, 1978), p. 2.

<sup>3</sup>Patricia A. Henning, "Research on Integrated Library Instruction," Drexel Library Quarterly, 7(July-Oct., 1971):339.

<sup>4</sup>George S. Bonn, Training Laymen in the Use of the Library (New Brunswick, New Jersey: Rutgers University, 1960).

<sup>5</sup>John Lubans, Jr., Educating the Library User (New York: R. R. Bowker, 1974).

<sup>6</sup>John Lubans, Jr., ed., Progress in Educating the Library User, (New York: R. R. Bowker, 1978).

bibliographies,<sup>7,8</sup> an annual review of the literature,<sup>9</sup> and a monthly column in a journal<sup>10</sup> continue to heighten the interest of librarians in library instruction. Librarians, in turn, have been spurred on to engage in many library orientation or instruction activities. These activities have taken the forms of: separate library courses, point-of-use instruction (instructional materials near the resource), subject guides, term-paper clinics, sound/slide orientations, computer-assisted instruction, course-related library instruction, handbooks, maps, and a host of others. Additionally, numerous librarians' experiences have been published in journals or in ERIC. Most of these articles are descriptive of the process used and the product

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<sup>7</sup>Deborah L. Lockwood, Comp., Library Instruction: A Bibliography (Westport, CT: Greenwood Press, 1979).

<sup>8</sup>George S. Bonn, Training Laymen in the Use of the Library (New Brunswick, New Jersey: Rutgers University, 1960).

<sup>9</sup>Hannelore B. Rader, "Library Orientation and Instruction: An Annotated Review of the Literature," Reference Services Review, 1975-date.

<sup>10</sup>Carolyn Kirkendall, ed., "Library Instruction: A Column of Opinion," Journal of Academic Librarianship, 1975-date.



produced.<sup>11,12,13,14,15,16,17</sup> An obvious omission is any kind of evaluation. This observation has been echoed by the remarks in an issue of The Library Drexel Quarterly devoted exclusively to library instruction. The author of an article in that journal states that:

Although there is almost unanimous agreement that college students should be instructed in the use of libraries and library materials, that body of knowledge identified as library science has not been enriched to any significant extent by the application of scientific research to the development of general principles of library instruction.<sup>18</sup>

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<sup>11</sup>Dorothy Bowers, "Maximizing Learning from Minicourse Instruction," Learning Today, 6(Spring 1973):50-60.

<sup>12</sup>Rosanne Kalick and Marilyn Menack, "The Case of Pringles Potato Chips: A Community College Library Changes from a Storehouse of Information into a Learning Center," Community College Frontiers, 6(Fall 1977):47-49.

<sup>13</sup>Walter Wagner, "On Integrating Libraries and Classrooms: An Experiment Worth Continuing," Learning Today, 6(Winter 1973):48-62.

<sup>14</sup>Anne Roberts, A Study of Ten SUNY Campuses Offering an Undergraduate Credit Course in Library Instruction (Albany, New York: Albany Libraries, Albany State University of New York, 1977; Bethesda, Md.: ERIC Document Reproduction Service, ED 157 529, 1978).

<sup>15</sup>Eileen Dubin et. al., "An In Depth Analysis of a Term Paper Clinic," Illinois Libraries, 60(March 1978):324-333.

<sup>16</sup>Daniel Gore, "Teaching Bibliography to College Freshman," Educational Forum, 34(Nov. 1969):111-117.

<sup>17</sup>Miriam Sue Dudley, "Teaching Library Skills to College Students," Advances in Librarianship, 3(New York: Seminar Press, 1972):83-105.

<sup>18</sup>Patricia A. Henning, "Research on Integrated Library Instruction," Drexel Library Quarterly, 7(July-Oct. 1971):339.

There has also been a lack of studies done on the effects of library instruction on the student. Academic librarians conducting instructional programs and their administrations have a "gut" feeling that students do benefit from these programs (or they would not allow these programs to continue). Just what benefits are derived is not known for certain.

Several library instruction programs exist (or have existed) which examine benefits derived from their programs. Foremost and most relevant to the approach of this study are those at Monteith College, Earlham College, Brooklyn College, and Leeward Community College. A description of each of these instructional programs follows.

#### Monteith College

In April, 1960, Wayne State University entered into a contract with the Office of Education to conduct at Monteith College a research project concerned with exploring methods of developing a more vital relationship between the library and college teaching.<sup>19</sup>

The two-year project was directed by Patricia B. Knapp and built on another study which Knapp had done earlier at Knox College.<sup>20</sup>

The Monteith College Experiment, as it is commonly referred to, "tried to teach use of the library as a means of learning problem-solving

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<sup>18</sup>Ibid., p. 339.

<sup>19</sup>Patricia B. Knapp, The Monteith College Library Experiment, (New York: Scarecrow Press, 1966), p. 11.

<sup>20</sup>Stuart Wayne Miller, Library Use Instruction in Selected American Colleges (Champaign: University of Illinois, 1978), p. 5.

skills applicable to all subjects."<sup>21</sup> This was to be accomplished because as Knapp explains:

Traditional college instruction fails to exploit fully the library resources available for it and that the average college student's experiences with the library constitute a limited and fairly insignificant part of his education.<sup>22</sup>

The educational program at Monteith provided a general and liberal arts education for its students. For the duration of the Monteith Experiment, the college's student enrollment grew from about 300 to 700 at the end of the project. The faculty expanded from 15 to 30 members.

The faculty were consulted with the planning and writing of library assignments related to and integrated in course work. This concept was more fully explained in the project proposal which states that:

The ultimate purpose of the Monteith Library Program is to stimulate and guide students in developing sophisticated understanding of the library and increasing competence in its use. To achieve this end, it proposes to provide students with experiences which are functionally related to their course work. Planning such experiences will involve library instructional coordination on an unprecedented scale. The specific objectives of the first phase of the Program, the pilot project, therefore, are (1) an appraisal of a structure established for the purpose of attaining this coordination, (2) an exploration of new methods of relating the library to the instructional program, and (3) a preliminary assessment of the effectiveness of these methods.<sup>23</sup>

By the time the project ended operation in the spring of 1961, fourteen library assignments related to various courses had been

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<sup>21</sup>Ibid., p. 5.

<sup>22</sup>Knapp, The Monteith College Library Experiment, p. 11.

<sup>23</sup>Ibid., p. 11.

written.<sup>24</sup> Each assignment was carefully written to sequentially build upon what had been taught about library use. Every assignment was planned ". . . in such a way that it contributed to the students' understanding not of specific tools and procedures, but of underlying principles of library and bibliographic organization."<sup>25</sup>

Those principles which explain the library and bibliographic organization are quite different from the faculty members' system. The library tools consist of the classification system, card catalog, periodical indexes, etc. Students are generally taught to use these tools. Unfortunately, they do not perform well in locating materials the faculty member wants the student to find. Knapp found that by using discipline-oriented materials, i.e., guides to the literature, annual reviews, bibliographical reviews, etc., those resources which the faculty member felt were important, were quickly located.<sup>26</sup>

Knapp also found that an assignment which is course-related is not enough. The instructor must see the value of the library assignment. Further, the instructor must believe in the value of the assignments, grade them, and the grade must be figured into the overall course grade.<sup>27</sup> The program and the library assignments had to take into consideration four criteria which Knapp felt would make the value of the assignment evident to the instructor.

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<sup>24</sup>Ibid., p. 39.

<sup>25</sup>Miller, Library Use Instruction in Selected American Colleges, p. 5.

<sup>26</sup>Knapp, The Monteith College Library Experiment, pp. 41-42.

<sup>27</sup>Ibid., pp. 39-40.

These criteria are:

1. The sequence must have intrinsic unity and coherence.
2. The total program must be functionally related to the curriculum.
3. Every assignment must have genuine intellectual content.
4. Every assignment must be practical, that is, it must not require extraordinary library services or resources.<sup>28</sup>

A description of the ten assignments which make up the Monteith College Experiment are described in the table on page 12.<sup>29</sup>

The theoretical concepts which each assignment seeks to teach are identified in the column headed "Product of Assignment." It is these concepts which Knapp feels are sequential and finally lead the student to be able to prepare a bibliographic review of a discipline. Since these advanced assignments are for juniors and seniors (classes of students not in a community college) assignments for this group are not relevant to the scope of this paper.

The results of the Monteith experiment describe the exploration of new methods of relating the library to the instructional program, and also the effectiveness of these methods. As to the results, Knapp states:

The findings with regard to association between "outcomes" and "exposure" to library assignments may be summarized as follows:

1. There is an association between the two when "outcomes" refers to long-range performance, i.e.,

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<sup>28</sup>Ibid., p. 84.

<sup>29</sup>Ibid., pp. 86-87.

Sequence of Library Assignments for  
the Monteith Curriculum

Title of the Assignment	Product of Assignment	Theme of Assignment	Subject of the Host Assignment	Basic Courses in the Curriculum*	Year & Quarter
1. Independence	Answers to questions on "Great Ideas," from card cat., <u>OED</u> , <u>Int. Index</u> , <u>Readers Guide</u> , <u>Syntopicon</u>	The pluralism of "ways"	Foundations of Society	Sci. of Soc. 131 (Nat. Sci. 131)	Fresh. I
2. Book Evaluation	Preliminary and rapid appraisal of 10 books	The "way" of the open shelf	Case study	Sci. of Soc. 132 (Nat. Sci. 132)	Fresh. II
3. Review of the Literature	Hypothetical research problem and references for it	The org. of the lit. of research	Research Project	Sci. of Soc. 133 (Nat. Sci. 133)	Fresh. III
4. Economic Index	Paper predicting economic growth of one country	Using sources of data in social science	Underdeveloped Areas	Sci. of Soc. 231 (Nat. Sci. 231)	Soph. I
5. Winchell Exercise	List of references on discipline selected from Winchell, Ulrich, etc.	Basic organization of a discipline	Social Movement	Sci. of Soc. 232 (Nat. Sci. 232)	Soph. II
6. Guide to the Literature	Annotated bibliography of standard sources of information on a discipline	A bridge between library org. and org. of discipline	(Independent Study)	Sci. of Soc. 232** Nat. Sci. 233** Hum. Stud. 431**	Soph. II Soph. III Senior I

(Continued)

Title of the Assignment	Product of Assignment	Theme of Assignment	Subject of the Host Assignment	Basic Courses in the Curriculum*	Year & Quarter
7. Popular Science	Paper on limitations & distortions of popular presentation of a scientific subject	Sources of data in natural science		Nat. Sci. 233 (Hum. Stud. 231)	Soph. III
8. Bibliog. in the Humanities	Paper evaluating three bibliographic tools in the humanities	Org. of scholarly lit. in humanities	Joyce (or another artist)	Hum. Stud. 331	Junior I
9. Plan of Reading	Proposed reading list for two terms in course	Sources of criticism		Hum. Stud. 332 Hum. Stud. 333	Junior II Junior III
10. Bibliographic Review	Review of the literature for two terms in course	Exploration of scholarship in depth		(Senior Collog.) Senior Essay	Senior II
				(Senior Collog.) Senior Essay	Senior III

\* No library assignment is scheduled for courses indicated in parentheses.

\*\* Every student is required to take the final segment of at least one of the three courses independently, i.e., without attending classes. We propose a "guide to the literature" assignment for the first term in which he does this.

- a. a clear, and statistically significant association between "exposure" and "staying on schedule," or meeting degree requirements on time,
  - b. a possible, but not statistically significant association between "exposure" and maintaining a good honor point average.
2. There is an association, which might prove to be significant if the sample were large enough for an adequate measure, between "exposure" and a one-shot traditional measure of educational achievement, the Graduate Record Examination.
  3. There is no significant association between "exposure" and "outcomes" when the latter is understood to refer to:
    - a. a change in intellectual capacity, such as is measured by the Test of Critical Thinking,
    - b. perception of the college, as measured by the College Characteristics Index.<sup>30</sup>

These and other Monteith College experiment findings offer several important considerations for this study. First, if there is a significant association between exposure to library instruction programs and staying on schedule, then, retention rates should be examined during the first two years of a student's college experience. Also, if there is a link between a better Graduate Record Examination score and library instruction, then course and semester grade point averages might also be examined.

In the area of the assignments, a sequential ordering of assignments with an overall plan in mind is best. Attention must be given to assuring the instructor's belief in the value of the assignments as well as relating them to the content of the course.

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<sup>30</sup>Ibid., p. 51.



Although the Monteith College experiment did not continue beyond the pilot study it had many positive results. Librarians began to view their role as one of equal partnership with the classroom teacher in the instructional process. Any instructional process which included library assignments could result in a more successful college experience for students.

### Earlham College

The Earlham College Library began offering integrated library instruction in 1965. The impetus for beginning such a program was the the reference librarian's observation of students' inadequacies in using a library. The library staff of this small, Quaker college decided to offer a library instruction program. The program is based on three guiding principles. These principles are course-related, demonstration, and gradation.<sup>31,32</sup> Course-related means that the librarians meet with classes which have research papers or other assignments that should motivate students to use a library. Demonstrations refers to the approach the librarians use in giving library instruction. The librarians present a literature search similar to the one the student might do. In this presentation, a search strategy is discussed and applied to a topic to demonstrate how resources can be brought to bear on

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<sup>31</sup>James R. Kennedy, Jr., "Integrated Library Instruction," Library Journal, 95(April 1970):1450.

<sup>32</sup>James R. Kennedy, Jr. et. al., "Course-related Library Instruction: A Case Study of the English and Biology Departments at Earlham College," Drexel Library Quarterly, 7(July-October 1971):279.

that single topic or assignment. The final principle, that of gradation, is a sequential building of the level of difficulty of resources which the student is taught.

This teaching takes place on four levels: the pre-freshman, freshman, beginning major, and the senior seminar. Each level has a specific body of information to be ascertained or conveyed and doesn't overlap with another level. The pre-freshman involves the passing of the Library Knowledge Test. The freshman is informed by letter before coming to campus that he or she will be taking the test and is given some idea of what is covered. If a student does not pass the test, he or she is informed of the availability of help from the librarian. The student can fail the test and decide not to seek help. The librarians feel that it is the student's right to refuse help and he or she will not be forced to accept help.

During the second or freshman level, the librarians meet with each freshman during his or her second semester of the two-semester required humanities course. The librarian meets with the classes for one hour explaining and demonstrating the library search strategy as well as seven basic reference resources. An annotated bibliography of these resources is distributed to the students. The seven resources are: Subject Headings Used in the Dictionary Catalog of the Library of Congress, Book Review Digest, Social Sciences & Humanities Index, Public Affairs Information Service Bulletin, Essay and General Literature Index, Biography Index, and the New York Times Index.<sup>33</sup> These seven

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<sup>33</sup>Ibid., p. 284.

resources are used to stress to the students the materials which are available which were not in their high school libraries. The subject headings book is a real necessity since the Earlham library does not make "see" or "see also" cards for their card catalog. Later on, the librarians meet with the students in small groups after they have begun working on their papers. At this meeting, problems using library resources are solved.

The third level of library instruction is given to students when they begin taking courses in their major. Generally, one course can be identified as the first one in a major's course series. The librarian meets with this class and gives them some questions to answer. Possible ways to approach the questions are explained, and the class meets several days later to go over the answers. In discussing answers to these questions, the librarian covers the major resources in the students' discipline. The librarians at Earlham have described the students' reactions to their description of resources by saying, "It was as if Houdini were sharing his secrets with a group of neophyte magicians."<sup>34</sup>

The fourth and final level at Earlham is the senior seminar. This seminar is more individualized than any of the other levels. At this level, the student is required to write a paper on a topic in his or her major. This topic must also be related to another subject field. In this way, the student writes an interdisciplinary paper and in the

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<sup>34</sup>Ibid., p. 288.

process learns about the literature in another field. The librarian must work with the students individually in order to help them locate interdisciplinary resources available.

There are two major differences between what is being done at Earlham and what is done in this study. The first difference is in purpose. At Earlham, the student is introduced to different specific resources throughout his or her college years. In this study, the student is immediately introduced to all types of resources. At Earlham, the resource is an end in itself; in this study, the resource is a means used to learn about a specific type of resource.

The second major difference is that Earlham does not determine what, if anything, the student has learned through some kind of evaluation. Central to this study is the need to evaluate in order to determine the value of library instruction.

#### Brooklyn College

The study conducted by Patricia Breivik at the Brooklyn College in 1972 has many similarities in setting to this study. Brooklyn College is a two-year open-admissions college somewhat like Moraine Valley Community College. Therefore, her bibliographic instruction approach and philosophy is worth considering.

Breivik's experience and procedure is well documented in a book she has written describing the Brooklyn experiment.<sup>35</sup> Her experience is valuable in her attempt to do evaluation of student academic progress.

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<sup>35</sup>Patricia Senn Breivik, Open Admissions and the Academic Library (Chicago: American Library Association, 1977).

Rather than one experimental group, she had two as well as a control group. The three groups are described as those receiving (1) weekly library instruction (2) traditional library instruction (an orientation tour and a three-hour lecture on the card catalog and indexes) and (3) no library instruction whatsoever.

These approaches were oriented to and incorporated into sections of English 1.2 (Basic Writing) taught by two professors. English 1.2 is for those students whose English placement test puts them in an educationally disadvantaged group. One professor taught two control groups, a weekly library group, and a traditional library group. The second professor taught four more groups just like the first professors. Total students involved were approximately 130.<sup>36</sup> A librarian, Breivik, taught the weekly and traditional sessions.

Three primary objectives were planned for the group that received weekly library instruction. These objectives were for students:

1. to perceive informational sources, that is libraries are a means to success
2. to gain ability in the use of library resources
3. to derive pleasure from the use of library resources.<sup>37</sup>

These objectives were to be accomplished by special meetings with Breivik. The students in the weekly library instruction group attended not only their regular English classes, but also an additional hour in the library with Breivik.<sup>38</sup> The additional hour was not to be used

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<sup>36</sup>Ibid., p. 49.

<sup>37</sup>Ibid., p. 41.

<sup>38</sup>Ibid., p. 46.

to give the student a well-rounded library and research skill program. Rather, the library information which the student received would be related to that week's writing assignment. Assignment-related library instruction is meant to give the student an immediate need for the library information. In this framework, library instruction becomes something of use now, rather than some day.

Six principles were followed in Breivik's teaching to assure the immediate use of the instruction. These six principles are:

1. The information to be covered should be approached from the viewpoint of student need, and not that of a well-rounded library and research skills program. This meant that much attention was paid to areas not traditionally considered the prerogative of libraries, for example, how to determine main ideas in books and articles.
2. No library tools should be taught per se, but only as means to success in the course. Therefore, card catalog analytics, including subject tracings, were discussed at length for the help they could provide in evaluating available materials' value in relation to research needs, but atlases were never mentioned.
3. Students should be taught to evaluate the usefulness for their individual writing assignments of one type of information over another. Thus they contrasted information in Collier's Encyclopedia with the World Book, the information in the pamphlet file with that in books (and only incidentally--see point 2--learned how to use these tools).
4. The information covered should have immediate application through hands-on use and, when possible, adaptability into that week's writing assignment.
5. Students should be exposed to the wide variety of materials available in a library; for example, every student looked at a different specialized dictionary and shared what he or she found with his or her class.

6. Students should be shown methods for handling information; for example, a system for taking notes on 3- by 5-inch cards was demonstrated.<sup>39</sup>

Students that received the three hours of traditional library instruction were concerned with:

1. The importance of information to academic and future success; a tour of the Brooklyn College library.
2. How to locate books and evaluate their usefulness before reading them; how to take notes on book information.
3. How to locate and evaluate nonbook information, with emphasis on Reader's Guide and special consideration of the pamphlet file and New York Times Index; how to take notes on periodical information.<sup>40</sup>

The third and final group did not receive any library instruction. Some students may have gained library instruction, but for this, the control group, nothing was planned.

Evaluation was to be based on two factors of academic success: grade and retention. Breivik's experiment ran two semesters. A summary of the statistical results follow.<sup>41</sup>

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<sup>39</sup>Ibid., p. 45.

<sup>40</sup>Ibid., p. 47.

<sup>41</sup>Ibid., p. 94.

TWO SEMESTER COMPARISON OF  
MEAN GRADE POINT AVERAGES

AND  
STUDENT RETENTION

Group	Semester of Experiment		Following Semester		Gain/Loss	
	Student Count	Mean GPA	Student Count	Mean GPA	Student Count	Mean GPA
A—Weekly Spring	14	1.73	11	2.10	-3	+0.37
A—Control	16	1.27	11	0.92	-5	-0.35
B—Traditional Spring	18	1.32	15	1.07	-3	-0.25
B—Control	19	1.22	16	0.91	-3	-0.31
B—Weekly Fall	18	1.53	15	1.85	-3	+0.32
B—Control	15	1.93	14	2.36	-1	+0.43
A—Traditional Fall	15	1.41	10	2.12	-5	+0.71
A—Control	14	1.18	10	1.46	-4	+0.28

SUMMARY COMPARISON BY TYPE OF LIBRARY INSTRUCTION

Weekly	16	1.63	13	1.98	-3	+0.35
Traditional	16.5	1.37	12.5	1.60	-4	+0.23
Control	16	1.40	13	1.41	-3	+0.01



Comparing the before and after papers (i.e., initial paper and final paper) disclosed a mean grade gain of 11.65 for those students receiving weekly instruction, 5.51 for students receiving traditional instruction, and 11.18 for students in the control group.<sup>42</sup> These results are mixed and seem to indicate that no library instruction is better than the traditional method for increasing grades. Although the weekly group did show the greatest gains.

The gains in retention clearly indicate the advantage of some type of library instruction. The percentage of students completing the English course requirements were: 79 percent of students receiving weekly library instruction, 70 percent of those receiving traditional library instruction, and 64 percent of those in the control group.<sup>43</sup>

The results of Breivik's experiment make any conclusion regarding mean G.P.A. and mean grade gain on papers written inconclusive. The mean G.P.A. when comparing summary results by type of instruction indicates traditional and control group is close. In rank order, the control group edges out the traditional with mean grades of 1.40 and 1.37 respectively. The weekly group does rank number one on a mean G.P.A. of 1.63.

When examining the enrollment retention for completion of English course requirements, library instruction, regardless of the amount or type, proves to be valuable.

Although Breivik's study differs from this author's study in approach to content taught, Breivik's study indicates a weekly library

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<sup>42</sup>Ibid., p. 56.

<sup>43</sup>Ibid., p. 57.

instruction program produces gains in the areas of grade and retention. Breivik teaches only the content needed to complete the paper at hand that particular week. Whereas, this author's study teaches a bibliographic structure for information regardless of subject and relates that to the assignment at hand.

#### Leeward Community College

The program conducted by this library is described in detail in Floyd Cammack's book entitled, Community College Library Instruction. Leeward Community College, located in Pearl City, Hawaii, has characteristics in common with Moraine Valley College. Both colleges are approximately 10 years old, offer liberal arts and vocational-technical programs, and are located in suburbs of major cities.

Leeward's basic library instruction program can best be described as course-integrated and workbook centered. The library unit is one of four in the one-semester English 100 individualized expository writing course. The units covered in the course (in the order covered) are: (1) language and usage; (2) basic expository writing; (3) library use; and (4) advanced expository writing.<sup>44</sup>

The library use unit is administered entirely by the library staff.<sup>45</sup> The students study pamphlets and/or tapes discussing library usage which are kept on reserve in the library. The library unit

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<sup>44</sup>Floyd M. Cammack, et. al., Community College Library Instruction, (Hamden, Connecticut: Lennet Books, 1979), p. 24.

<sup>45</sup>Ibid., p. 27.

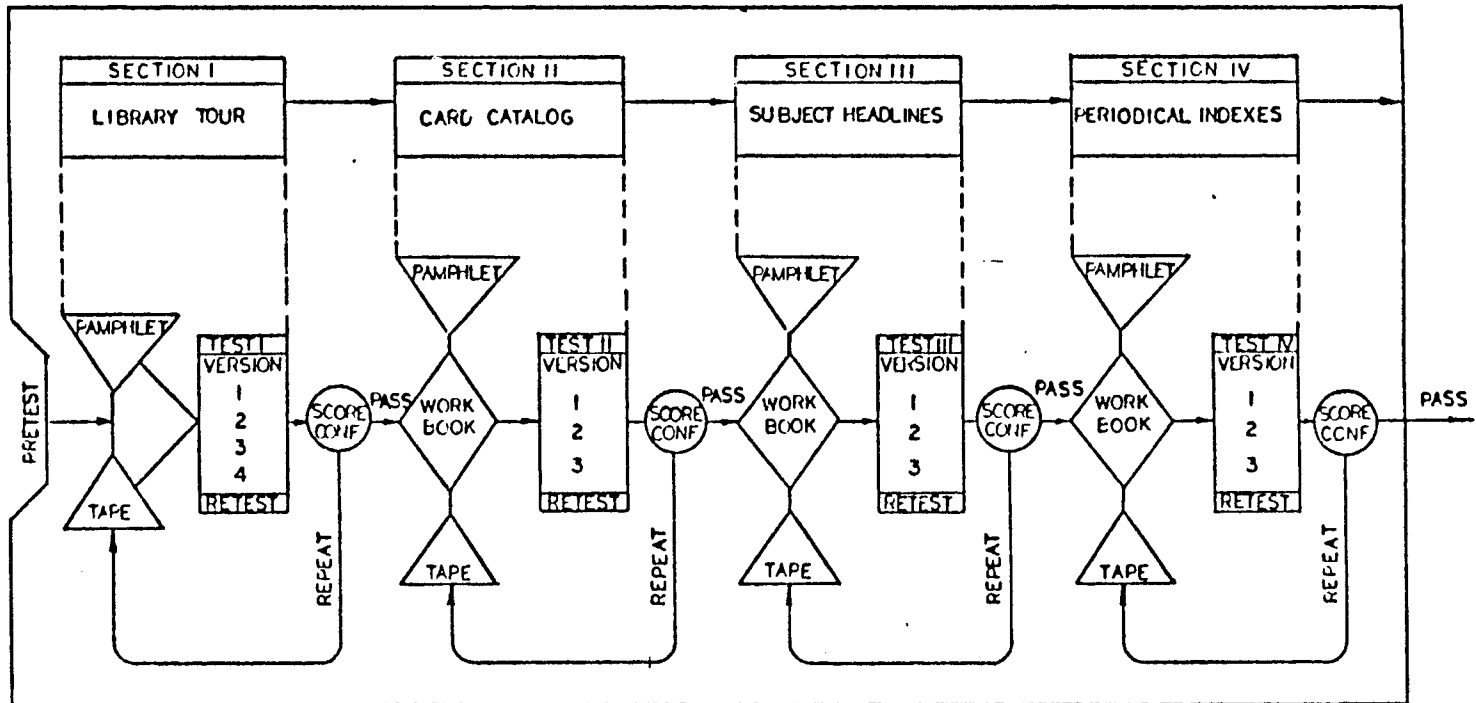
is composed of four sections. These sections are: (1) library tour, (2) card catalog, (3) Library of Congress subject headings, and (4) periodicals and periodical indexes.<sup>46</sup> After studying the pamphlets and tapes on the library sections, the students then work through a series of workbook exercises. These exercises ask the student to respond to what he or she has just learned in the pamphlets and tapes. Answers for these exercises are included in the workbook. The student is then given a test over each section as he or she has completed it. The student has the option of taking a retest over any section until satisfied with the grade for that section. If at any time the student doesn't understand any portion of the unit or exercise, the librarians are available for individual conferences. A flowchart of how the system works appears on page 26.<sup>47</sup>

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<sup>46</sup>Ibid., p. 27.

<sup>47</sup>Ibid., p. 214.

LEEWARD COMMUNITY COLLEGE LIBRARY  
 BASIC LIBRARY INSTRUCTION UNIT



The entire library unit takes the student between eight and ten hours to complete. This unit is no longer than any of the other course subunits since there is no homework.<sup>48</sup> Although some students complain about doing the library unit, to most it is worthwhile. "Some students have indicated that the library unit is the most worthwhile aspect of the whole freshman English program."<sup>49</sup>

The Leeward library instruction program, which has been going on for five years, reaches many of their college freshmen. In fact, during the 1977-78 school year, it reached 4,715 students.<sup>50</sup> Yet, the value for going through this library unit has not been proven. There isn't any proof of what has been found since we are unaware of what the students knew when they began the units.

It was not until recent years that a pre-test was offered at Leeward. The creation of the pre-test was at the prompting of a faculty member.<sup>51</sup> A pre-test coupled with a post-test would give some indication of what would be learned, if anything, by going through the library units. The pre-test should test the student in those areas which are to be taught. It would indicate what the student already knows. A post-test (or in this case, a composite of the four sub-section sources) should indicate what learning has taken place. Unfortunately,

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<sup>48</sup>Ibid., p. 27.

<sup>49</sup>Ibid., p. 27.

<sup>50</sup>Ibid., p. 72.

<sup>51</sup>Ibid., p. 75.

upon examination of the pre-test, it was found not to cover all the areas taught in the library unit.

In examining the library unit for value to the student, one is hard pressed to find a desirable one. It is true that the unit is part of the English 100 course and in order to pass that course, a student must pass the library unit. In this way, the library unit is integrated into the language arts curriculum, but the unit could just as easily have been put into a biology or welding course. The library instruction is not related to the content of the language arts curriculum or any area's curriculum for that matter. The unit is in fact self-sufficient. The value of going through the library unit could be shown by relating, not just integrating, the library unit to the subject content of the course. For example, in the library unit which deals with subject headings, the library examples and exercises might have been related to the topics of the papers written in this course.

Cammack claims that ". . . essential to an effective program in library instruction are student motivation and staff enthusiasm."<sup>52</sup> While this seems reasonable, he chose to get student motivation by integrating library instruction into the English 100 course. This approach creates motivation for the student to learn about library instruction. Cammack overlooks the fact that motivation exists whenever a student has an assignment such as they do in English 100, to do a research paper. The need for library instruction is great at this time.

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<sup>52</sup>Ibid., p. 61.

A concerned librarian should take that opportunity to integrate and relate library instruction to the student at this time.

Leeward's library instruction program, although educationally well constructed, fails in the area of program evaluation. Another area which is lacking is the failure to relate the subject content of the course to the library instruction program. These two problem areas have been addressed in the study done at Moraine Valley Community College.

CHAPTER III  
RESEARCH DESIGN

Introduction

This study compares the academic performance of two groups of college students enrolled in Communications (English) 101 using two different approaches to library instruction. One group received bibliographic instruction which was integrated into the course in such a way as to complement the papers assigned throughout the course. This group became the experimental group.

The other group didn't receive course-integrated bibliographic instruction. This group, which made up the control group, received the typical faculty-taught unit on how to use the library to write the term paper. This instruction was given in the four weeks prior to when the paper was due and consisted of the Harbrace College Handbook's chapter on the library coupled with a fifty-minute general orientation to the library given by a librarian.

The Setting

Moraine Valley Community College is one of 35 public two-year colleges in Illinois. The college district has an estimated population of 362,000 (1979), spread over approximately 139 square miles. The district, created in 1967, embraces 25 incorporated municipalities and many unincorporated areas as well.

Schools in the district include six public high school districts and three parochial high schools. Additionally, there are 24 public



elementary school districts and 27 private elementary schools within the district.

Workers within the district have a median family income (in 1977) ranging from a low of \$13,630 to a high of \$30,970. Homes at that time ranged from a low of \$18,500 to a high of \$60,500. The housing in the district is continuing to grow, especially in the southwest portion of the district where open land is still available.

In addition to homeowners, the district is comprised of over 5,000 firms and businesses. These range in size from one-man home-operated businesses to a firm employing over 3,000 people. There are several industrial parks within the district which indicate continued growth for the college's business community.

As this growth occurs, the college continues to grow and change to meet new curricular needs of those within the district. The college has many offerings including the degrees of: Associate in Arts, Associate in Science, and Associate in Applied Sciences. The college has large vocational-technical offerings amounting to over 35 programs at this time which award one- and two-year certificates. Finally, the college offers to the community courses on virtually any topic a resident might desire.

The student population for fall, 1980, was 10,917 students. This figure becomes a full-time equivalent of 5,461. The average student is 28 years of age. Yet, the largest percentage of the student body, 32 percent, falls between the ages of 19-21. The ethnic makeup of the population shows a proponderance is white (93 percent). The remaining percentage is made up of Blacks and Hispanics.

### Participants

The instructors were selected randomly. Each instructor who taught a Communications 101 class was assigned a number. Then, by consulting a random number table, two instructors were chosen. The first faculty member became the instructor for the experimental group and the second the instructor for the control group. Each section taught by each instructor was then assigned a number. The random number table was once again consulted to select three sections for each instructor. These sections became the experimental and control groups. A description of the groups can be found in Appendix D.

Communications 101 is the first class offered in the series of English courses at Moraine Valley Community College. It is a transfer, freshman English writing course in which the student writes nine papers. One of the last papers written is the term paper.

It was originally considered that the same instructor could teach both the control and experimental groups. However, an undesirable side effect of there being only one instructor would be carryover of instruction between groups. If an instructor taught both groups, he might unconsciously teach the control group some bibliographic instruction. By having two instructors, the problem of carryover should be eliminated. With this in mind, it was decided to use two different instructors.

A consequence of having two instructors demands identical teaching situations. Although identical situations are impossible, an effort to match them as closely as possible is vital. Both instructional situations are matched in several areas. First and most important, all

students were enrolled in Communications 101. Both teachers have M.A. in English. For this study, both instructors used a lecture-discussion method mixed with student conferences.

### Treatment

There are some conditions which are the same for both the experimental and control groups. Both teachers gave the students the same number and types of papers to do. In all, nine papers were assigned. The papers were: (1) detail and description, (2) definition, (3) example, (4) process, (5) comparison and contrast, (6) classification, (7) cause and effect, and (8) persuasion. Also, finally, a term paper was required. Both teachers used the Harbrace College Handbook (8th edition) and Step-by-Step College Writing by Randy DeVillez. The teachers gave the same grammar test to all students at the beginning of the course. The test identified areas in grammar where students were having difficulties. By diagnosing problem areas, the teachers were able to teach grammar units on these problems.

In addition to the grammar test, students were given the Library Inventory Test (See Appendix A) at the beginning of the course. This test was given to students in both the control and experimental groups. The Library Inventory Test is the precursor and prepublication draft of The Library Skills Test which this writer co-authored and is copyrighted by the Illinois Association of College and Research Libraries. The validated final test is available from the Scholastic Testing Service, Bensenville, Illinois. At the end of the course, the same test was given

to the students in both groups again and becomes the post-test score. The Library Inventory Test scores did not figure into the course grade, but the students were not apprised of this fact.

#### The Experimental Group

The bibliographic instruction given the experimental group is based upon the bibliographic chain of information. This theoretical structure of information is proposed by James Doyle and George H. Grimes.<sup>53</sup>

The Doyle and Grimes concept states that there is a structure to information. The structure follows knowledge from an initial idea a person has until it becomes an accepted fact in the general body of knowledge. Following the structure leads the student to choose a particular source to find the needed information. The sources range from a human (scientist, etc.,) to an encyclopedia. A copy of the bibliographic chain is found on the following page.<sup>54</sup>

Validity for this type of sequential, building-block structure for a bibliographic instruction curriculum can be found in the research of Patricia B. Knapp, on the Monteith College experiment, and the program at Earlham College. Both programs are described in detail in Chapter II of this study.

Eight units of bibliographic instruction were written based upon the bibliographic chain of information. The bibliographic instruction curriculum took into consideration the four areas of curriculum design

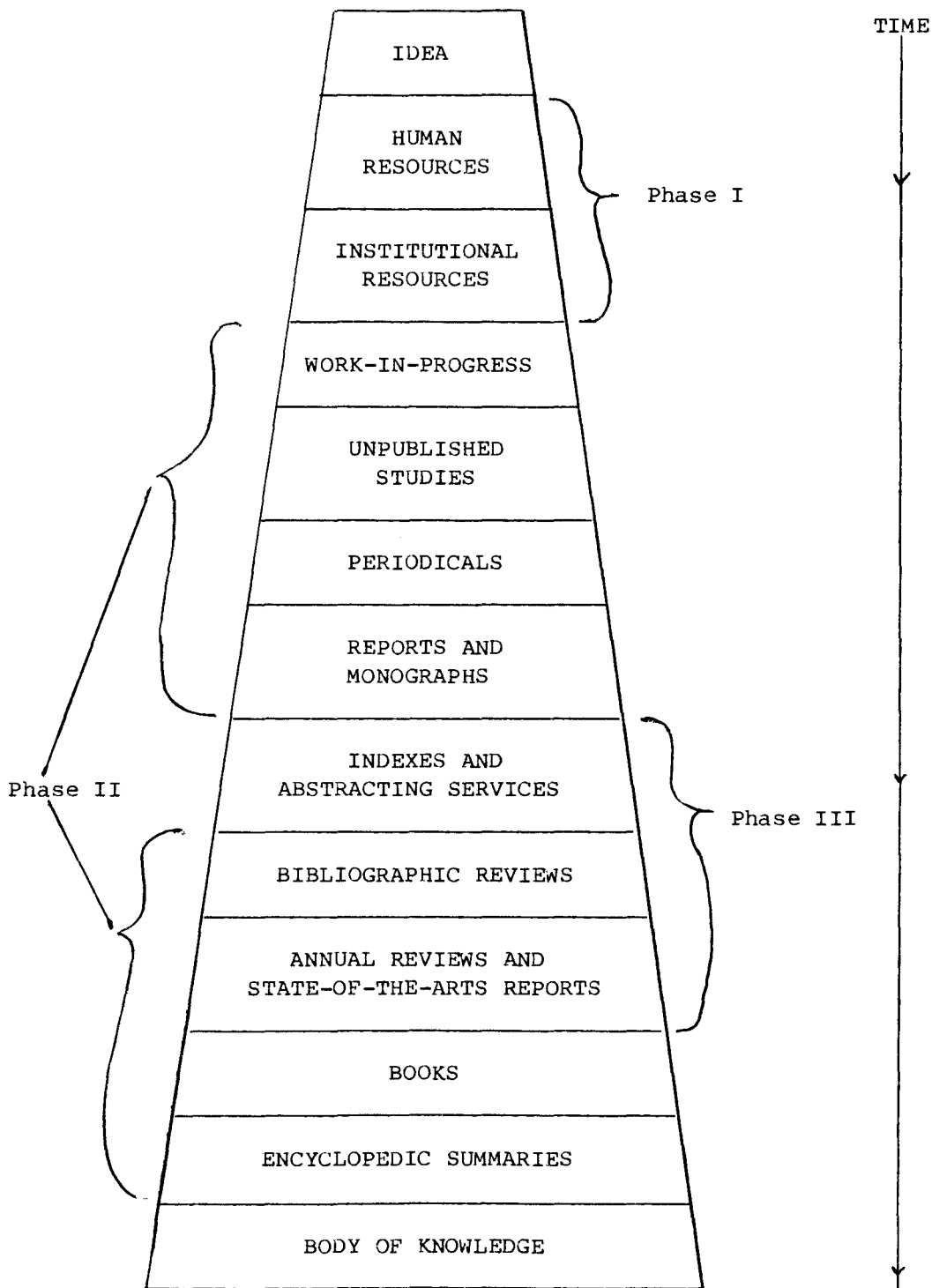
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<sup>53</sup>James M. Doyle and George H. Grimes, Reference Resources: A Systematic Approach. (Metuchen, New Jersey: Scarecrow Press, 1976), p. 6.

<sup>54</sup>Ibid., p. 6.

### BIBLIOGRAPHIC CHAIN

Taken from Reference Resources by James M. Doyle and George H. Grimes



emphasized by Ralph Tyler in his Basic Principles of Curriculum and Instruction. A clear indication of the purpose to be achieved by the bibliographic instruction units was written. Which experiences would achieve these purposes and how they achieved these experiences was explained. These eight units were then given to the English faculty and library faculty. The faculty members reviewed the units of instruction for construct and content validity. Corrections and changes which they proposed were incorporated into the final bibliographic instruction units.

The library units were taught every other week during the 17-week semester. In the weeks when bibliographic instruction was not given, the students were assigned to write the eight papers mentioned earlier in this chapter.

After the student was introduced to the bibliographic chain, other units dealt with sources of information. The emphasis is not totally on the source. Rather, the emphasis is on how the source fits into the bibliographic chain. Most important was for the student to learn when to use the source. The student was taught a strategy to use when searching for information.

Each unit (See Appendix A) is based upon sources and is composed of two parts. One part is a discussion introducing the student to the source. The second part gives the student hands-on experience with the source. The students' participation is an important part of the instruction in bibliographic instruction. Ralph Tyler stresses the importance of education experiences and says, "Learning takes place through the active behavior of the student; it is what he does that he

learns, not what the teacher does."<sup>55</sup> The students' hands-on experience included an activity or assignment. The assignment on the use of the source relates to the next writing assignment. An example will illustrate how the bibliographic instruction and writing assignments were linked. The student might be given a writing assignment where he or she is asked to write a definition paper. During the class period before the paper is due, the student will learn about and use various types of dictionaries. The student will have the opportunity to see examples of definitions similar to what must be done in the writing assignment. These examples should help improve his or her writing assignment. Additionally, the student will be helped to use the dictionary when it is needed as part of the search strategy. The timing of linking library instruction with class assignment needs has been examined at Earlham College where course integration is widespread throughout the curriculum. One of Earlham's librarians, James R. Kennedy, Jr., says:

Timing also affects motivation. The optimal time for library instruction is within a week of the time that students start the assignment. If the instruction is offered too early or too late, students tend to be indifferent to it. Occasionally, faculty have requested instruction for a course simply because they thought it was a "good thing," but it was not related to any assignment. Then students tended toward somnolence. It is doubtful if even an alert student would learn much in this situation, because real learning takes place when students actually use the sources, not just when they see them used.<sup>56</sup>

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<sup>55</sup>Ralph W. Tyler, Basic Principles of Curriculum and Instruction. (Chicago: University of Chicago Press, 1949), p. 63.

<sup>56</sup>James R. Kennedy, Jr., "Integrated Library Instruction," Library Journal, 95 (April 15, 1970):1452.

The coupling of the writing assignment and the bibliographic instruction unit is an important element in determining the academic impact of bibliographic instruction. The linking of a student's need (writing assignment) with a strategy for achieving that need (bibliographic units) should make the bibliographic instruction more effective. The bibliographic instruction could also be retained longer since it is perceived as a need for student survival not just a "good thing" to know about.

#### The Control Group

The control group did not go through the same eight bibliographic instruction units that the experimental group went through every other week throughout the semester. Instead, the control group received intense library instruction during the 12th, 13th, 14th, and 15th weeks of the semester just prior to the term paper due date.

Students in the control group were given a 50-minute sound-slide orientation to the Moraine Valley College Library by a college librarian. This presentation, due to the time limitation, only introduces the student to the card catalog, the Readers' Guide to Periodical Literature, and locating resources.

In the weeks after the library orientation, the instructor lectured on documentation and library research. The library research information was taken from the Harbrace College Handbook, 8th edition, and Step-by-Step College Writing by Randy DeVillez. Most teachers prefer these texts to teach how to use periodical indexes, reference books, and the card catalog so that students will be able to do research for their term paper. The students did not receive any hands-on exercises using



the library resources, even though in total they received 600 minutes of library instruction. This is the same amount of time which the experimental group received for bibliographic instruction, even though the group received the instruction over 17 weeks.

### Instrumentation

Both groups were given the Library Inventory Test<sup>57</sup> as a pre- and post-test. The test consists of 30 multiple-choice and matching questions. The test covers research strategy, the card catalog, definitions, the Readers' Guide to Periodical Literature, and parts of a book. Although an untimed instrument, field testing suggests that most (over 90 percent) complete the test in 20 minutes. The test was modified and in its current form is called the Library Skills Test.<sup>58</sup> The Library Skills Test was adopted and is copyrighted by the Illinois Association of College and Research Libraries. The Scholastic Testing Service of Bensenville, Illinois, did the psychometric evaluation of the test. Construct and content validity was done as well as field testing and norming by academic levels. Reliability was ascertained by use of the Kuder Richardson (KR<sub>20</sub>) procedure, and the test was found to be reliable, i.e., KR<sub>20</sub>=0.67. Concurrent coefficient between test scores and grade average was 0.59. Thus, the instrument was found to have strong concurrent validity properties.

In addition, norming tables were developed by academic level.

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<sup>57</sup>Miller, Larry A. Library Inventory Test. Unpublished test, 1979.

<sup>58</sup>Illinois Association of College and Research Libraries. Library Skills Test. (Bensenville, Illinois: Scholastic Testing Service, Inc., 1980).

Also, standard scores by academic level were provided.

#### Summary of the Similarities Between the Treatment Conditions

The content covered by the experimental and control groups was similar. Both covered the use of resources in the library to write a term paper. Yet, the theoretical construct was quite different. The control group was taught how to use a particular resource, whereas the experimental group was taught about types of resources and when to use that resource to find the information needed.

Both groups were matched in the time spent on the library instruction. The control group received library instruction for four weeks at 150 minutes per week for a total of 600 minutes. This instruction was given during the four weeks prior to the term paper being due. The experimental group received bibliographic instruction given in eight units spread throughout the 17-week semester. Yet, it still took 600 minutes as did the instruction to the control group.

Presentation media for the library instruction material was the same for both groups. Lecture and audio-visual materials were used by both instructors. The groups' exposure to the library resources differed. While both groups received lectures on the resources, only the experimental group had hands-on exercises to work through after the presentations on the resources.

#### Statistical Procedure

The research hypotheses for this study are:

1. There is a significant statistical difference in the means in the bibliographic instruction test from pre- to post-testing and for the treatment and control groups.

2. There is a significant statistical difference in the mean grade point average (G.P.A.) in Communications 101.
3. There is a significant statistical difference in the overall semester G.P.A.
4. There is a significant statistical difference in the retention rates for students undergoing treatment versus the control group.

### Statistics

Hypothesis 1 was tested using the two-way analysis of variance. The two-way design will be presented using the formula found on the next page.

Interaction will be tested first at the .05 level of significance ( $p < .05$ ). If this term is not significant, it will be investigated by the t-test for independence. Four t-tests will be presented. Pre-versus post-test scores for both the treatment and control groups and also treatment versus control for the pre- and post-test means. The level of significance will be  $< .05$ . All hypothesis testing will take the form of a two-tailed test. To test hypotheses 2 and 3, a t-test was used to do grade comparisons.

The fourth hypothesis was tested by the Chi-square test for independence. The rows were treatment versus control and the columns were enrollment status (enrolled or did not enroll) for the subsequent term.

The test hypotheses are:

1. There is no significant statistical difference in the means in the Library Inventory Test from pre- to post-testing for the treatment and control groups.
2. There is no significant statistical difference in the mean grade point average (G.P.A.) in Communications 101 for the treatment and control groups.

ANALYSIS OF VARIANCE AND EXPECTED MEAN SQUARES FOR THE  
TWO-WAY CLASSIFICATION WITH ONE OBSERVATION PER CELL

$$\text{MODEL: } y_{ij} = \mu + \alpha_i + \beta_j + \epsilon_{ij} \quad (i=1,2,\dots,c; j=1,2,\dots,r)$$

SOURCE OF VARIATION	DEGREES OF FREEDOM	SUM OF SQUARES	MEAN SQUARE	TEST STATISTIC
COLUMN EFFECTS	$c-1$	$SSC = \frac{\sum_i y_i^2}{r} - \frac{y^2}{cr}$	$B_1^2 = \frac{SSC}{c-1}$	$\frac{B_1^2}{B_6^2}$
ROW EFFECTS	$r-1$	$SSR = \frac{\sum_j y_j^2}{c} - \frac{y^2}{cr}$	$B_2^2 = \frac{SSR}{r-1}$	$\frac{B_2^2}{B_6^2}$
ERROR	$(c-1)(r-1)$	$SSE = SST - SSC - SSR$	$B_6^2 = \frac{SSE}{(c-1)(r-1)}$	
TOTAL	$cr-1$	$\sum_i \sum_j y_{ij}^2 - \frac{y^2}{cr}$		

SOURCE OF VARIATION	DEGREES OF FREEDOM	MEAN SQUARE	EXPECTED MEAN SQUARE FOR		
			FIXED MODEL	MIXED MODEL ( $\sigma$ )	RANDOM MODEL
COLUMN EFFECTS	$c-1$	$B_1^2$	$\sigma^2 + r \left( \frac{\sum_i \alpha_i^2}{c-1} \right)$	$\sigma^2 + r \left( \frac{\sum_i \alpha_i^2}{c-1} \right)$	$\sigma^2 + r\sigma_\alpha^2$
ROW EFFECTS	$r-1$	$B_2^2$	$\sigma^2 + c \left( \frac{\sum_j \beta_j^2}{r-1} \right)$	$\sigma^2 + c\sigma_\beta^2$	$\sigma^2 + c\sigma_\beta^2$
ERROR	$(c-1)(r-1)$	$B_6^2$	$\sigma^2$	$\sigma^2$	$\sigma^2$
TOTAL	$cr-1$				

Taken From: CRC Handbook of Tables for Probability and Statistics,  
2nd edition, (Cleveland, Ohio: Chemical Rubber Company,  
1974 c1968).

3. There is no significant statistical difference in the overall semester G.P.A. for the treatment and control groups.
4. There is no significant statistical difference in the enrollment retention rate for students undergoing treatment versus the control group.

ADDITIONAL EVALUATION includes an interview of the instructors (see Appendix B) of the control and experimental groups. Also, a follow-up questionnaire (see Appendix C) was sent to both groups of students one year after the course was completed.

The faculty interviews allow the researcher to monitor what library information was taught, how it was taught, and how much time was spent teaching it. It was then possible to determine the equivalency of the two teaching methods of library instruction.

The student questionnaire concerned itself with what was taught, the value of what was taught, and student attitude toward the instructional method used. The questions also sought to get information on various aspects of library or bibliographic instruction. These aspects included which library units were most useful and does the bibliographic instruction carryover to other courses and libraries.

Coupling what is learned from the student survey with the statistical results, it is possible to comment on what instructional method students liked and which method appeared to help them do better academically. Ideally, students did best academically with the method which they liked the most. These results should provide valuable insights for educators teaching bibliographic instruction or traditional library instruction and using the delivery method of course-integrated versus the term-paper method.

## CHAPTER IV

### RESULTS

#### Introduction

This chapter presents the results of the performance of that group which received course-integrated library instruction (experimental group) and that group which received library instruction prior to when the research paper was due (control group) in five areas. These areas are: pre- and post-test means on the Library Inventory Test, grade point average (G.P.A.) in Communications 101, overall semester G.P.A., term paper grade, and attrition rate. What follows is a restatement of the four research hypotheses and the results of those statistical tests which were performed.

#### Hypothesis One

Hypothesis one states that there is no significant statistical difference between the means of the Library Inventory Test from the pre- to post-test scores for the treatment and control groups.

Table 1 shows a 1.62 unit gain for the experimental group from a pre-test score mean of 21.23 to a post-test score mean of 22.85. The control group shows a 0.76 unit gain from a pre-test score mean of 20.26 to a post-test score mean of 21.02. Irrespective of pre-post condition and experimental-control condition, the dispersion of the scores about the means were quite similar. That is, a low standard deviation of 3.14

Table 1

Descriptive Summary of the Library Inventory Test  
Results at Both Testings by Experimental  
and Control Conditions

Treatment	N	Test Administration					
		Pre		Post		Total	
		$\bar{X}$	SD	$\bar{X}$	SD	$\bar{X}$	SD
Experimental	53	21.23	3.27	22.85	3.14	22.04	3.29
Control	42	20.26	3.58	21.02	3.65	22.64	3.61
Total	95	20.80	3.42	22.04	3.48		

to a high standard deviation of 3.58. Thus, the distribution of scores about the means was almost identical.

Both groups showed gains in the mean from pre- to post-test scoring. The experimental group showed the greatest gain although the pre-test mean score was greater for the experimental group than the control group.

The data from Table 1 are based upon complete information for both testings. Fifty-three persons composed the experimental group and 42 persons composed the control group.

Table 2, the ANOVA summary table, shows an F value of 0.75 for interaction. This indicated that there was not a statistically significant interaction between the main effects ( $p > 0.05$ ). Thus, the main effects could be tested without violating an ANOVA assumption, i.e., correlated main effects terms. Therefore, the main effects terms were investigated, that is, for treatment (experimental versus control) and for time the instrument was administered (pre versus post).

Table 2

Two-way Analysis of Variance Summary Table for the Testing of the First Null Hypothesis; i.e., No Difference in the Means on the Library Inventory Test by Pre-Post Testing and by Treatment-Control Groups

Source	df	SS	MS	F
Treatment	1	91.19	91.19	7.93**
Time (pre-post)	1	73.29	73.29	6.37*
Interaction	1	8.67	8.67	0.75***
Within	186	2139.17	11.50	
Total	189	2312.32		

\*P < 0.05.

\*\*P < 0.01.

\*\*\*P > 0.20.

In the pre-post condition main effect, the mean of the post-test score exceeded the mean of the pre-test score. The mean of the main effect for post-test score was 22.04 and the mean of the main effect for pre-test score was 20.80 or a difference of 1.24 units and  $p < .05$  as shown in Table 1.

The treatment main effect shows the experimental group mean greater than the mean for the control group. The mean of the experimental group is 22.04 and the mean of the control group is 22.64, or a difference of 0.60 units and  $p < 0.01$  as shown in Table 1.

A summary of the testing of the first hypothesis resulted in the finding that there was not significant interaction between the main



effects. Furthermore, both main effects terms were significantly different with means of the experimental group exceeding the mean of the control group, and the post-testing mean exceeding the pre-testing mean. Based on the above results, hypothesis one is rejected. There was a statistically significant difference for both the pre- versus post-testing condition and for the experimental versus the control condition. The means at post-testing exceeded the mean at pre-testing ( $p < 0.05$ ) and the mean for the experimental group exceeded the mean for the control group ( $p < 0.05$ ).

It should be noted that hypothesis one was tested with only those students who had completed the Library Inventory Test at both the pre-treatment and post-treatment condition. A total of 23 students who were in the experimental group and a total of 21 students in the control condition were administered only the pre-test. Presented in Table 3 is a summary of pre-test scores for all students in both conditions.

Table 3

Descriptive Summary of the Library Inventory Test Results at Pre-testing by Experimental and Control Condition and for Students with only Pre-test Scores and for Students with Pre- and Post-Test Scores

Status	Treatment Condition					
	<u>Experimental</u>			<u>Control</u>		
	N	$\bar{X}$	SD	N	$\bar{X}$	SD
Pre only	23	21.09	2.09	21	20.19	2.82
Pre and Post	53	21.23	3.27	42	20.26	3.58

The standard deviations of the Library Inventory Test scores of the students with only pre-test scores were lower than those for students with pre- and post-test scores. In addition, the scores were more widely spread for the control group with only pre-test scores than for the experimental group with only pre-test scores. Regarding the mean differences between groups, two trends were found. Students administered the pre- and post-test had slightly higher mean scores than students administered only the pre-test. These differences were 0.14 test score units for the experimental group and 0.07 test score units for the control group. Students in the control group had slightly higher mean scores than students in the experimental group. These differences were 0.10 scale units for students with only pre-test scores and 0.03 scale units for students with both pre- and post-test scores.

The effect of not having all post-test information was addressed by three t-tests. Presented in Table 4 are three mean comparisons for the Library Inventory Test: complete versus incomplete data for the experimental group; complete versus incomplete data for the control group; and incomplete data for the experimental and control groups. All t-tests were not statistically significant ( $p > 0.05$ ). Thus, the conclusion is reached that the effects of not having post-test scores on 23 students in the experimental group and 21 students in the control group would not change the findings for the testing of hypothesis one. Since the students with pre- and post-test Library Inventory Test scores did not differ significantly from those students with just pre-test Library Inventory Test scores, then the rejection of null hypothesis one was affirmed.

It should be noted that the pre- and post-test results of the Library Inventory Test were not included in the grade averages. These test results were collected but not scored or reported to the instructors. Also, the students thought the scores were part of their grade. Thus, instructor bias as a function of test score feedback was eliminated, and the students were encouraged to perform up to their maximum capacity.

Table 4

T-tests to Investigate the Effects of Only Pre-test  
Library Inventory Test Scores On  
Testing the First Null Hypothesis

Comparison	<u>t</u> value	df	<u>p</u>
Pre-test information vs. complete information:			
Experimental Group	0.24	74	0.80
Control Group	0.08	61	0.90
Pre-test only:			
Experimental vs. Control	1.78	42	0.10

Table 5

Comparison of the Grades Earned in Communication 101  
of the Experimental and Control Groups

Treatment	N	Grades*		<u>t</u> - Value	df
		<u>X</u>	SD		
Experimental	76	2.55	0.97	1.52**	137
Control	63	2.79	0.88		

\*Based on a 4.0 scale.

\*\*p < 0.10.

## Hypothesis Two

Hypothesis two states that there is no statistical difference in the mean grade in Communications 101 for the treatment and control groups.

The data used in Table 5 was taken from the availability of information on 76 persons in the experimental group and 63 persons in the control group.

Based on a four-point grading scale (A = 4, B = 3, C = 2, D = 1, and F = 0), the experimental group showed a mean of 2.55 and a standard deviation of 0.97; the control group showed an  $\bar{X}$  of 2.79 and a standard deviation of 0.88. The experimental group showed a t-value of 1.52 with 137 degrees of freedom ( $p < 0.10$ ). The result is that there was not significant difference, thus the null hypothesis two accepted.

While there was not a significant difference in the mean grade earned in Communications 101 between the experimental and control groups, one component of those grades was investigated. This was the grade earned for the term paper; the one assignment which best reflected those skills imparted in the library instruction in Communications 101. It should be noted that the term paper grade was just one of nine grades used to compute the final grade in that class.

The summary data presented in Table 6 was from the term paper grades based on a four-point grading scale (A=4, B=3, C=2, D=1, and F=0) earned by the 76 persons in the experimental group and by the 63 persons in the control group. Both groups had similar means, 2.08 for the experimental , group and 1.94 for the control group, and had similar standard deviations 1.16 for the experimental group and 1.09 for the control group. While the experimental group mean was higher than the control group mean, the

difference was only 0.14 units on the 4.0 grading scale. For this comparison, the difference was not statistically significant as the  $t$ -value was 0.73 with 137 degrees of freedom ( $p > 0.05$ ).

Table 6  
Comparison of the Term Paper Grades of  
Experimental and Control Groups

Treatment	N	Grades*		$t$ -** Value	df
		$\bar{X}$	SD		
Experimental	76	2.08	1.16	0.73	137
Control	63	1.94	1.09		

\*Based on 4.0 scale

\*\* $p < 0.05$

While the students in the experimental group tended to earn higher grades on the term paper than the students in the control group, the students in the control group tended to earn higher final grades in Communications 101 than students in the experimental group. However, none of these differences in means were statistically significant ( $p > 0.05$ ). The opposite trends are explained by the fact that the term paper was just one of nine grades used to compute the final grade in this course, Communications 101.

It should be noted that the pre- and post-test results of the Library Inventory Test were not included in the grade averages. These test results were collected but not scored or reported to the instructors. Also, the students thought the scores were part of their grade. Thus, instructor bias as a function of test-score feedback was

eliminated and the students were encouraged to perform up to their maximum capacity.

### Hypothesis Three

Hypothesis three states that there is no significant difference in the overall grade average for treatment and control groups.

Table 7

Comparison of the Semester Grade Point Average  
of Experimental and Control Groups

Treatment	N	Grades*		t- Value	df
		$\bar{X}$	SD		
Experimental	76	2.74	0.70	0.73**	137
Control	63	2.84	0.82		

\*Based upon a 4.0 scale.

\*\* $p < 0.40$ .

The data used in Table 7 is once again taken from the availability of information on 76 persons in the experimental group and 63 persons in the control group. Based on a four-point grading scale (A = 4, B = 3, C = 2, D = 1, F = 0), the experimental group showed an  $\bar{X}$  of 2.74 and a standard deviation of 0.70. The control group had an  $\bar{X}$  of 2.84 with a standard deviation of 0.82. The  $t$ -value of the experimental group was 0.73 which is significant at the  $p < 0.40$  level. The result is that there is no significant difference at the  $p < 0.05$  level and hypothesis three is accepted.

#### Hypothesis Four

Hypothesis four states that there is no statistical difference in the enrollment retention rate for the treatment and control groups.

Table 8

Comparison of the Attrition Rates of the Experimental and Control Groups\*

Group	N	Attrition	Percent
Experimental	76	6	7.9
Control	63	12	19.1

\*Chi-square adjusted by the Yates Continuity Correction = 2.87,  $df = 1$ ,  $p > 0.05$ .

The experimental group of 76 had an attrition of 6, or 7.9 percent. The control group of 63 had an attrition of 12, or 19.1 percent. With

the Chi-square statistic performed and adjusted by the Yates Continuity Correction, the result is 2.87, with 1 degree of freedom,  $p > 0.05$ . The result is that hypothesis five is accepted. A descriptive summary of the status of the students is provided in Table 8.

#### Additional Post-Hoc Analysis

Although not a hypothesis in this study, a follow-up survey (See Appendix C) was sent out one year after completion of the course. Thirty-six students responded from the experimental group and 27 students responded from the control group. A summary of the perceptions of both groups is presented in Table 6. While a multiple point scale (very much = 1, somewhat = 2, very little = 3, not at all = 4, no opinion = 5) was used, the responses were collapsed into a most-favorable versus a not-most-favorable response pattern. This was performed so that a Chi-square test of independence could be conducted with the expected values meeting the criterion of 5 or greater. A summary of this analysis is also presented in Table 9.

Table 9

Comparison of the Library Unit Evaluation of the Experimental Control Groups: Likert Scale Items.

Criterion	<u>Most Favorable Responses</u>				Corrected Chi-Square***	p- level
	<u>Experimental*</u>		<u>Control**</u>			
	N	%	N	%		
Did you like the library units?	17	47	18	67	1.64	0.20



Table 9 (cont'd.)

Most Favorable ResponsesExperimental\*    Control\*\*

Criterion	N	%	N	%	Corrected Chi-Square***	p- level
Did the library unit help you to do better in other courses?	11	31	10	37	0.07	0.80
Did the library unit include information which you didn't know before?	15	42	18	67	2.93	0.10
Did the library unit help you write your term paper?	15	42	16	58	1.27	0.30
Did the library unit help you write your other COM papers?	5	14	3	11	0.07	0.80
Did the library unit include information which you can use for other than school assignments?	14	39	14	52	0.59	0.50
Did the library unit help you to use other libraries besides the MVCC LRC?	5	14	8	30	1.47	0.30
Did you find the library unit on the card catalog useful?	15	42	20	74	5.32	0.05
Did you find the unit on encyclopedias useful?	8	22	15	56	6.02	0.05
Did you find the unit on indexes useful?	9	25	15	56	4.87	0.05

Table 9 (cont'd.)

Most Favorable Responses

Criterion	<u>Experimental*</u>		<u>Control**</u>		Corrected Chi-Square***	<u>p-</u> <u>level</u>
	N	%	N	%		
Did you find the unit on the search strategy useful?	10	28	10	37	0.26	0.70
Did the LRC tour seem worthwhile?	10	28	16	58	5.08	0.05
Did you find "hands-on" working with library material helpful in learning about search?	14	39	14	52	0.59	0.70

\*Total response 36 for the Experimental Group.

\*\*Total response 27 for the Control Group.

\*\*\*Chi-Square adjusted by Yates Continuity Correction,  $df = 1$ .

There was a significant difference in perception of both groups for the questions about the units on the card catalog, encyclopedias, indexes, and the library tours with responses of the control group being more favorable than those of the experimental group in these instances. Otherwise, there is no significant difference in the perceptions.

The survey instrument further asked for responses on previous library instruction and feeling concerning the methods used by the instructors. Table 10 summarized the affirmative responses to these three questions. There were no statistically significant differences since the computed value of the statistic was less than the table value of the statistic for  $p < 0.05$ .

Table 10

Comparison of the Library Evaluation Unit for the Experimental  
and Control Groups: Yes-No Response Items

Criterion	<u>Affirmative Responses</u>				Corrected Chi-Square***	<u>p-</u> level
	<u>Experimental*</u>		<u>Control**</u>			
	N	%	N	%		
Did you have instruction on the use of the library in elementary or high school?	20	83	21	78	0.05	0.90
Did you like the method your instructor used to teach you about the library?	27	75	25	93	2.20	0.20
Did the method your in- structor used to teach you about the library help you learn?	26	72	24	89	1.70	0.20

\*Total responses, 36 for the Experimental Group.

\*\*Total responses, 27 for the Control Group.

\*\*\*Chi-Square adjusted by Yates Continuity Correction,  $df = 1$ .

Question 19 on the survey instrument asked the students to indicate their preferences for instructional method. The affirmative responses are given in Table 11.

There is no significant difference between the groups in response to hands-on experience, lecture, or the discussion methods. Yet, in regards to the problem solving method, the experimental group favored this method to a greater degree than the control group.

Table 11

Comparison of the Library Evaluation Unit for the Experimental  
and Control Groups: Instruction Methods Measured by  
Yes-No Responses

Alternative	<u>Affirmative Responses</u>				Corrected Chi-Square***	p- level
	<u>Experimental*</u>		<u>Control**</u>			
	N	%	N	%		
Problem Solving	24	67	9	33	6.61	0.05
Hands-on Experience	19	53	13	48	0.01	0.95
Lecture	10	28	8	30	0.01	0.95
Discussion	7	19	8	30	0.41	0.70

\*Total responses, 36 for the Experimental Group.

\*\*Total responses, 21 for the Control Group.

\*\*\*Chi-Square corrected by Yates Continuity Correction,  $df = 1$ .

### Summary

In summary, null hypothesis one was rejected. There were significant differences in the scores in the Library Inventory Test with the post-scores exceeding the pre-scores and the experimental group exceeding the control group. Null hypotheses two, three and four are accepted, in that there is no significant difference in mean grade point averages and enrollment retention, respectively.

The results of the survey instrument indicate that the control group significantly differentiated from the experimental group in their preference for the usefulness of the library unit, unit on encyclopedias, unit on indexes, and library tour.

There is no significant difference in the groups' responses on previous library instruction, methods of instruction liked or success of the method of instruction in terms of helping learning take place. When asked about methods they liked seeing used in teaching, there is a significant difference only in the experimental group's preference for the problem-solving method.

## CHAPTER V

### CONCLUSIONS, RECOMMENDATIONS AND IMPLICATIONS

This chapter restates the purpose and the limitations of this study and presents conclusions based on the analysis of the data. It further contains recommendations and implications for further research.

This study looked at the effects of integrating library instruction and a research strategy into a beginning writing class curriculum. The library instruction was integrated in such a way as to complement the papers assigned throughout the course, rather than be a separate unit of instruction given just prior to writing a term paper.

The students in the experimental group began the course by taking a pre-test of library skills which later served as the benchmark for comparison with the post-test score. Students were introduced to a search strategy based upon the up-to-dateness of information and the time which passes before an information source publishes the knowledge.

Students proceeded to use different resources to write the papers required in the course. They were introduced, through hands-on assignments, to various library resources which related to the type of paper they were writing. An example of this would be the instruction and use of magazines versus journals when a comparison and contrast paper is assigned.

In addition to the experimental group, there was another group, taught by a different faculty member, which didn't receive integrated

library instruction. This group, which makes up the control group, received the typical faculty-taught unit on how to write the term paper given just before the paper was due. The control group also received a 50-minute general orientation to the LRC given by a librarian. The control group was also given the same pre- and post-tests as the experimental group.

The experimental and control groups were then compared on the basis of academic performance. Pre- and post-test scores were compared for a significant statistical difference on the Library Inventory Test. Also, grade-point average for the course and the semester were examined. The enrollment retention for the semester following the course was reviewed for the presence of significant differences between the experimental and control groups.

This study was limited to one community college campus in a predominantly white, middle-class area. The experimental and control groups were composed of three sections each. Total number of students involved with complete documentation was 139; 76 persons were in the experimental group, and 63 were in the control group.

The purpose of the study was to compare the experimental and control groups' performance in various measurable areas. One of the first measurements was comparison of pre versus post Library Inventory Test scores. Grade point average for Communication 101, as well as overall semester grade, was also compared for the two groups. Attrition rates for the experimental and control groups were also figured. Additionally,

a post-hoc analysis was done one year after completion of the course to find our perceptions of the course, units and methods.

### Conclusions

The study indicates that students in the experimental group did better on post-test scores on the Library Inventory Test than those in the control group. Based upon pre- and post-test scores, although both groups showed gains, the most gains in library instruction are made through the course integrated library instructional approach.

Although the experimental group learned more library skills, the two groups did not have a statistically significant difference in course grade point, semester grade point, or attrition rate. This appears to indicate that, over time, the control group did as well as students exposed to the integrated instruction.

This study did not look at how the students in the control group obtained the needed library skills on their own or the amount of effort they had to exert to obtain them. Certainly time was spent by the college librarians on a one-to-one basis teaching these students the library skills needed to succeed in research assignments. Probably the teacher had to teach the library skills on a one-to-one basis through office conferences or catch-as-one-can by answering questions when passing students in the halls. The time and effort that was spent on this happenstance library instruction was not considered in this study. Yet, it would seem that the class integrated library instruction would be the most efficient and cost-effective approach to conveying the



library instruction. The integrated instruction might also have been the most painless way for the students to obtain the library skills.

### Recommendations

1. Future studies should continue to examine long-term effects of bibliographic instruction. Particular emphasis should be given to academic indicators such as grades and attrition in order to determine if larger and more varied groups would have results different from this study.

2. Since the control group did exhibit growth in their acquisition of library skills, the alternatives by which this was realized should be documented, and time and effort expended by library staff in these activities should also be documented. Then a cost-benefit analysis of the isolated instructional approach versus the integrated instructional approach should be conducted. Since the non-systematic approach is usually on a one-to-one basis of the student with the library staff, it is hypothesized that the non-systematic alternative is more cost ineffective than the integrated learning method.

3. The integrated instruction approach should be recorded on audio-visual equipment. This would then serve as the instructional alternative for students not present in the class when the instruction is given. In addition, a study should be conducted to determine the growth in library skills via the audio-visual alternative versus the direct instruction approach. If the electronic media method is as satisfactory as the live presentation, library staff time would be freed and possibly more classroom time for other instructional activities would be realized.

4. The Harbrace College Handbook chapter on library instruction should be studied to see how well it prepares students to write a term paper. Discrepancies between content in the Harbrace and Library Skills Test should also be investigated.

### Implications

The study showed that although both groups made gains on the Library Inventory Test, the most gains were made by those exposed to the integrated instruction approach. Integrated bibliographic instruction seems to be the most effective way to convey library skills. The results of this study should encourage more widespread support for course-integrated bibliographic instruction.

Although the study would seem to indicate no difference in COM 101 grades, grade-point averages, or attrition, the results might be different when the sample group is larger and is characteristically more divergent. A racially or economically different group might experience gains in grades and also be able to stay in school when they obtain research skills, which are considered an integral part of a college education.

College units dealing with bibliographic instruction should use the problem-solving method when possible. The experimental group showed a statistically significant preference for the problem-solving technique when used in bibliographic instruction.

This study is a beginning point for studying the effects of bibliographic instruction. Future studies might consider examining other academic indicators or the performance of a larger more diverse group in the same academic indicators used in this study. The important concept is that the implications and ramifications of bibliographic instruction are being examined. As more statistically supported studies examining the effects of bibliographic instruction are completed, the more

widespread bibliographic instruction will be throughout the curriculum. Integration of bibliographic instruction throughout the curriculum will be instrumental in promoting successful life-long learning.

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APPENDIX A

CONTROL GROUP BIBLIOGRAPHIC INSTRUCTION UNITS

SAMPLE CALENDAR FOR COMMUNICATIONS/BIBLIOGRAPHIC INSTRUCTION COURSE

17 WEEKS LONG; 2 CLASS SESSIONS PER WEEK; EACH SESSION 1 HOUR AND 15 MINUTES LONG

Week	Tuesday	Thursday
1	1. Course Introduction Give Library Pre-Test Assignment: Take Grammar Test in Test Center	2. Bibliographic Instruction Unit #1
2	3. Bibliographic Instruc- tion Unit #2 Assignment: Read Thesis/Outline Chapter in Grammar Book	4. Cover Chapters 1 & 2 Grammar Book
3	5. Go over Grammar Test	6. Assign & Describe Paper #1: Detail and Description Paper
4	7. Bibliographic Instruc- tion Unit #3	8. Work with Students Individually on Paper #1
5	9. Collect Paper #1 Assign & Describe Paper #2: Definition Paper	10. Review Bibliographic Instruction Units #1 & 2 Go over Assignments
6	11. Work with Students Individually on Paper #2	12. Collect Paper #2 Assign & Describe Paper #3: Example Paper

Week	Tuesday	Thursday
7	13. Bibliographic Instruction Unit #4	14. Work with Students Individually on Paper #3
8	15. Collect Paper #3 Assign & Describe Paper #4: Process Paper	16. Bibliographic Instruction Unit #5
9	17. Bibliographic Instruction Unit #5 (continued)	18. Collect Paper #4 Assign & Describe Paper #5: Compare & Contrast Paper
10	19. Bibliographic Instruction Unit #6	20. Work with Students Individually on Paper #5
11	21. Collect Paper #5 Assign & Describe Paper #6: Classification Paper	22. Assign & Begin Coverage of the Research Paper (Footnoting)
12	23. Bibliographic Instruction Unit #7	24. Collect Paper #6 Assign & Describe Paper #7: Cause & Effect Paper
13	25. Research Paper Coverage Continues	26. Research Paper Coverage Continues... Work with Students Individually on Paper #7

Week	Tuesday	Thursday
14	27. Collect Paper #7 Assign & Describe Paper #8: Persuasion Paper	28. Work with Students Individually on Paper #8
15	29. Bibliographic Instruc- tion Unit #8	30. Collect Paper #8 Discuss Research Paper
16	31. Bibliographic Instruc- tion Review	32. Research Paper Due
17	33. Bibliographic Instruc- tion Post-Test	34. Return Research Paper & Exam

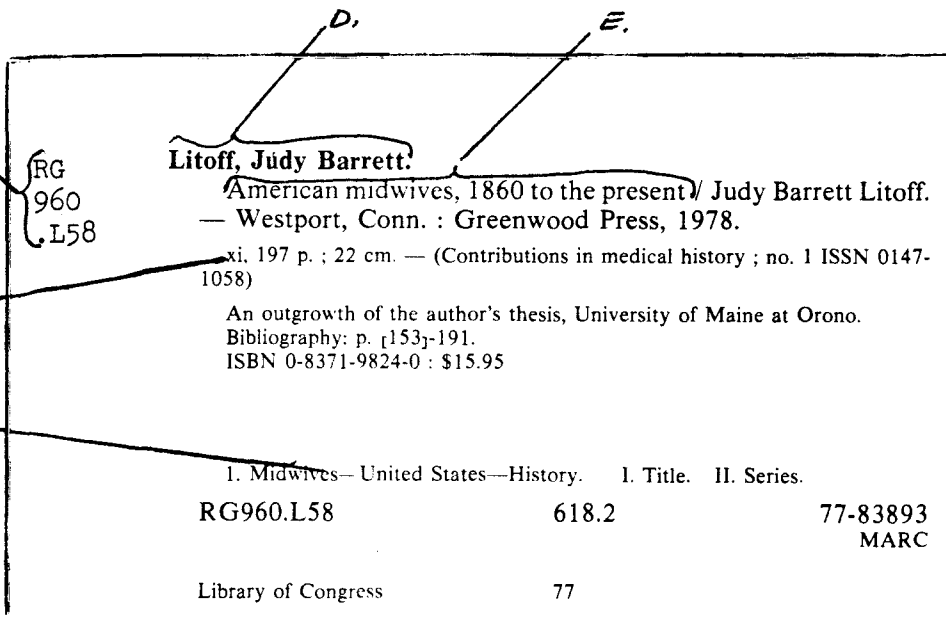
COM 101  
LIBRARY INSTRUCTION PRE-TEST

Name \_\_\_\_\_  
Date \_\_\_\_\_

Circle the correct answer.

- An example of information residing within the minds of people or groups (Phase I of the Bibliographic Chain) is
  - an encyclopedia
  - an institutional resource
  - an index
  - none of these
- An example of printed materials which have no intellectual content of their own (Phase III of the Bibliographic Chain) is
  - an idea
  - an index
  - an institutional resource
  - none of these

Use this catalog card to answer Questions 3 to 6.



- The call number of the book is
  - A              4. D
  - B              5. E
  - C              6. none of these

4. The subject heading for this book is

- |      |                  |
|------|------------------|
| 1. A | 4. D             |
| 2. B | 5. E             |
| 3. C | 6. none of these |

5. The collation is

- |      |                  |
|------|------------------|
| 1. A | 4. D             |
| 2. B | 5. E             |
| 3. C | 6. none of these |

6. The author is

- |      |                  |
|------|------------------|
| 1. A | 4. D             |
| 2. B | 5. E             |
| 3. C | 6. none of these |

Place the letter of the word in front of its definition:

A reserve material	J circulation desk
B anthology	K magazine
C bibliography	L library
D index	M stacks
E biography	N reference desk
F abstract	O card catalog
G main entry	P vertical file
H periodical	Q microform
I handbook	R audiovisual materials

7. \_\_\_\_\_ a collection of pamphlets, clippings, correspondence, or similar material in a drawer or box
8. \_\_\_\_\_ non-book materials such as records, slides, transparencies, etc.
9. \_\_\_\_\_ a list of materials by a certain author or on a certain subject
10. \_\_\_\_\_ the area or part of a library in which the books are stored or kept
11. \_\_\_\_\_ a detailed alphabetical list or table of topics mentioned in a book or other material
12. \_\_\_\_\_ a collection of choice extracts having a common characteristic such as subject matter
13. \_\_\_\_\_ an item which is in great demand because of being placed on reading lists and set on one side for very short limited periods of loan

14. \_\_\_\_\_ a written account of a person's life
15. \_\_\_\_\_ that area of a library where materials are charged out, returned, etc.
16. \_\_\_\_\_ a place set apart to contain books and other materials for reading, study, or reference
17. \_\_\_\_\_ a file of cards in alphabetical sequence listing the items in a library collection
18. \_\_\_\_\_ a magazine or other journal that is issued at regularly recurring intervals

Given this entry from the Reader's Guide to Periodical Literature, answer Questions 19 through 24.

#### SOILS

##### Phosphorus content

Detection and examination of anthrosols by phosphate analysis. R. C. Eldt. *bibl il Science* 197:1327-33 S 30 '77

#### SOILS. Potting

Greenhouse; adding aggregates to potting soil. J. Kilborn. *Horticulture* 55:50-1 N '77

#### SOLAR batteries

Solar cells find their niche in everyday life on earth. D. Morris. *il Smithsonian* 8:38-45 O '77

#### SOLAR collectors

Do-it-yourselfers give solar energy a sharp boost. *il U.S. News* 83:96-7 O 17 '77

#### SOLAR energy

Scientists urge President: stop reliance on coal and nuclear fuel; Go for development of uniform solar power. J. E. Persico. *Sci Digest* 82: 8-9+ O '77

Sunshine of your life. R. W. Moss. *il Sci Digest* 82:10-18+ O '77

Toward a solar civilization. F. Von Hippel and R. H. Williams. *bibl il Bull Atom Sci* 33:12-15 O '77

See also

Ocean thermal power plants

United States—Energy Research and Development Administration—Ocean Thermal Energy Conversion Program

#### Bibliography

Guide to solar info. L. Gutowski. *il Mech Illus* 73:126-7 N '77

19. "Solar energy" is
1. the title of the article
  2. the subject heading
  3. the magazine title
20. In the entry circled, "il" is the abbreviation for
1. illuminated
  2. illustrated
  3. the first word of the title of the magazine
  4. none of these



21. In the entry circled, the title is
1. Science Digest
  2. Sunshine of your life
  3. Solar energy
  4. Illustrated Science Digest
22. In the entry circled, the volume number is
1. 82
  2. 10
  3. 28
  4. 77
23. In the entry circled, the page on which the article begins is
1. 82
  2. 10
  3. 28
  4. 77
24. "United States--Energy Research and Development Administration--Ocean Thermal Energy Conversion Program" is
1. the title of an article
  2. a related subject heading used in the Reader's Guide
  3. the title of a book
  4. none of these
25. In the entry circled, the month of the magazine in which the article appears is
1. June
  2. July
  3. August
  4. none of these

Circle the correct answer to the following questions on parts of the book.

26. Material that is referred to in the text but not explained fully is found in the
1. preface
  2. appendix
  3. table of contents
  4. index

27. An introduction of the author and his reasons for writing the book are found in the
  1. preface
  2. appendix
  3. table of contents
  4. text
  
28. The listing and explanation of all technical or foreign words not explained in the body of the book is
  1. an appendix
  2. an index
  3. a glossary
  4. the preface
  
29. An outline of the chapters of the book and the page numbers are found in the
  1. table of contents
  2. appendix
  3. index
  4. bibliography
  
30. In order to determine how thoroughly a topic is covered in a book, look up the topic in the
  1. glossary
  2. bibliography
  3. index
  4. title page

## BIBLIOGRAPHIC INSTRUCTION UNIT #1: LRC ORIENTATION

Purpose:

The student must first become familiar with the physical facilities of the Learning Resources Center in order to be able to locate materials and services. This familiarity is a vital activity and helps the student break down any apprehension he or she may have about finding his or her way around the LRC.

Numbered cardboard signs are placed on books, objects, and places. The student matches the number on the sign (the numbered map helps in locating the signs) and writes a description of what is at that location.

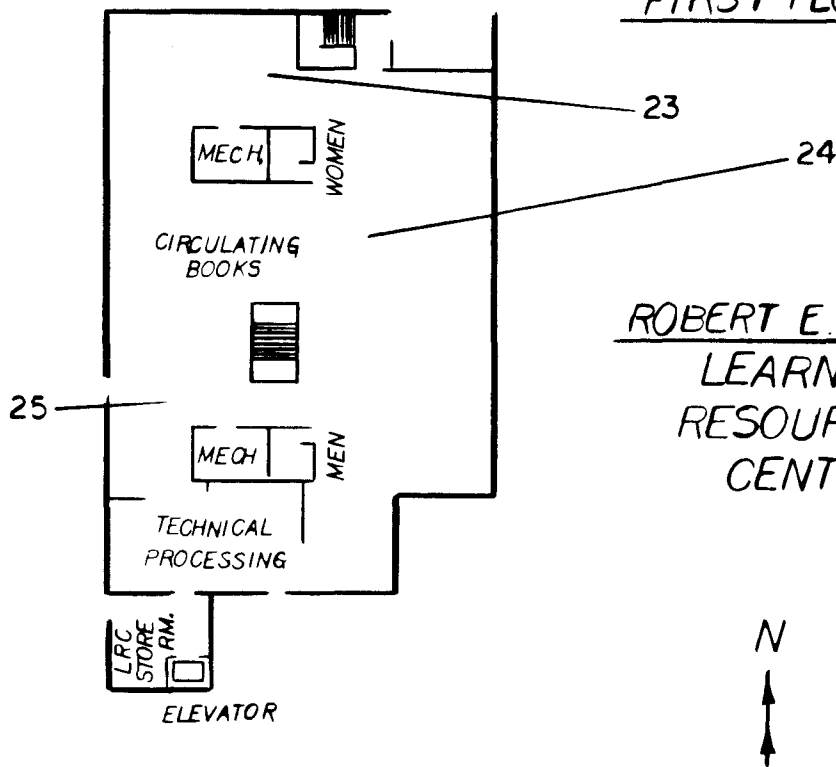
Objectives:

1. The student will gain familiarity with the location of materials in the MVCC LRC.
2. The student will see, handle, and indentify the many kinds of bibliographic materials available in the MVCC LRC..

Activities:

1. The student will view the MVCC LRC slide/tape presentation to see and hear about the physical facilities of the MVCC LRC.
2. The student will be given an unmarked numbered map of the MVCC LRC. The student will go from area to area in the LRC and fill in the name corresponding to the number of the area.

FIRST FLOOR

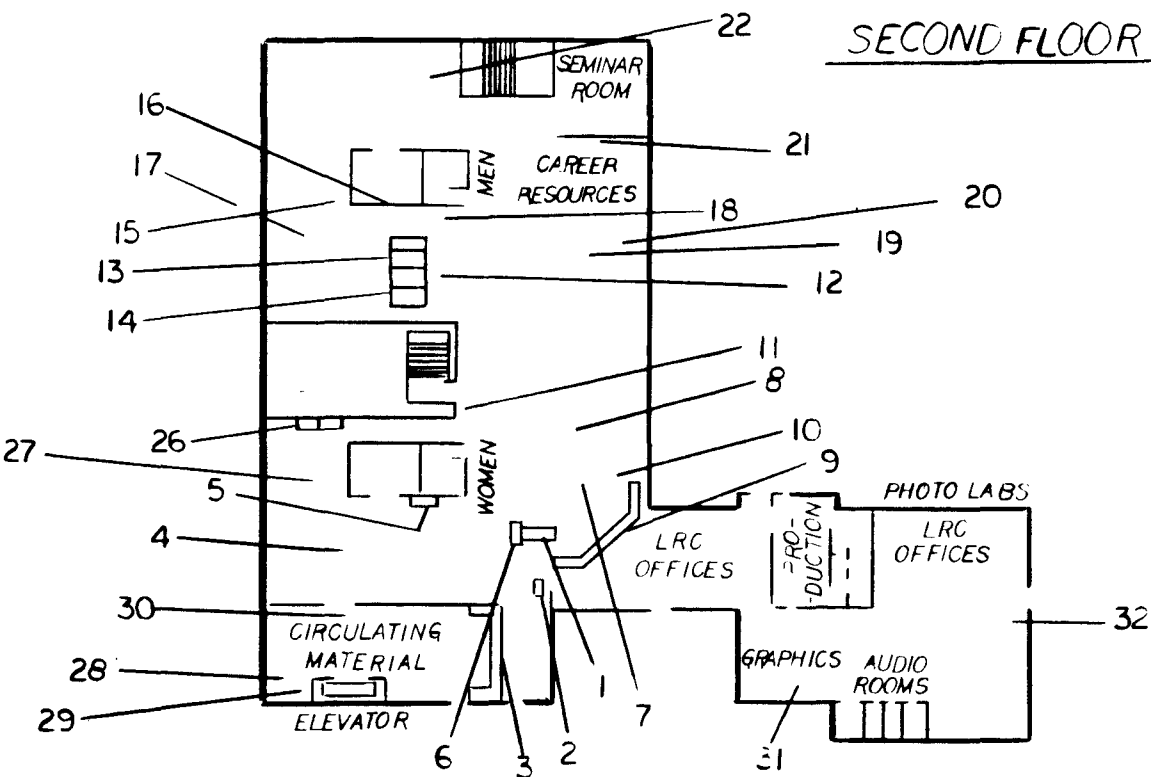


ROBERT E. TURNER  
LEARNING  
RESOURCES  
CENTER



TV

SECOND FLOOR



COM 101

Name \_\_\_\_\_

MVCC LRC ORIENTATION

Date \_\_\_\_\_

- |           |           |
|-----------|-----------|
| 1. _____  | 17. _____ |
| 2. _____  | 18. _____ |
| 3. _____  | 19. _____ |
| 4. _____  | 20. _____ |
| 5. _____  | 21. _____ |
| 6. _____  | 22. _____ |
| 17. _____ | 23. _____ |
| 18. _____ | 24. _____ |
| 19. _____ | 25. _____ |
| 10. _____ | 26. _____ |
| 11. _____ | 27. _____ |
| 12. _____ | 28. _____ |
| 13. _____ | 29. _____ |
| 14. _____ | 30. _____ |
| 15. _____ | 31. _____ |
| 16. _____ | 32. _____ |

## BIBLIOGRAPHIC INSTRUCTION UNIT #2: THE CHAIN OF INFORMATION

Purpose:

The teacher will lecture on the "Bibliographic Chain" as described by James M. Doyle and George H. Grimes in their book, Reference Resources: A Systematic Approach (Scarecrow Press, 1976). The "Chain" will allow the student to see the technical structure of knowledge and thereby see the pattern of information in all subject areas. The student will then have the opportunity to determine which reference resource in the "Chain" should be used to answer a question or solve a problem. In order for the student to use the library and its resources effectively and efficiently, he or she must be able to determine whether the information desired should be obtained from a researcher (human resource) or an encyclopedia.

Objectives:

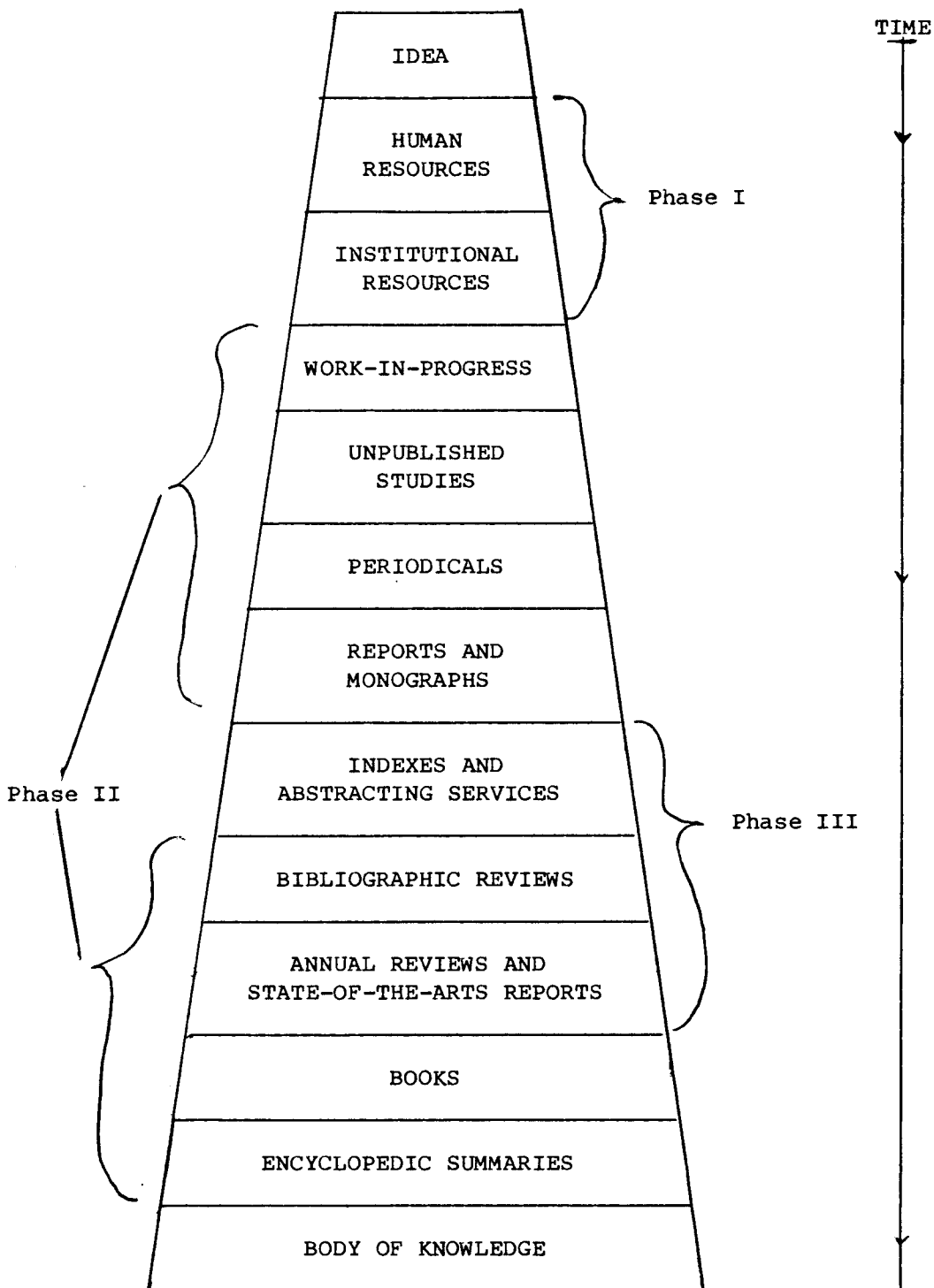
1. The student will be able to list the three phases of the information (bibliographic) chain.
2. Given a list of bibliographic materials, the student will identify in which phase of the information chain they belong.
3. The student will enumerate the steps whereby information progressed from an idea until it is widely dispersed in encyclopedias.
4. Students will identify those bibliographic materials relevant to each phase of the chain of information and describe each material's characteristics.

5. Given a set of questions the student will determine which phase of the information chain should contain the answer to the question. Once the paper phase has been determined, the student will then suggest a bibliographic tool to answer the question.

Activities:

1. The student will, given a list of five questions, identify the phase of information required, and why that phase was chosen. The student will also identify a general type of tool which might answer the question.

## UNIT #2: BIBLIOGRAPHIC CHAIN

Taken from Reference Resources by James M. Doyle and George H. Grimes



Name \_\_\_\_\_

UNIT #2

Date \_\_\_\_\_

## Directions:

For the following, indicate which phase (I, II, or III) of the bibliographic chain the question belongs. Explain how you determined that phase and what things led you to decide on that phase. Suggest a possible type of material (such as periodical articles, books, etc.) which might answer each question.

1. I would like a copy of the first six-month progress report by Jerome S. Simon. The research project he is working on for the National Science Foundation is on limb regeneration in humans.
2. I want some articles on methane recovery systems.
3. What were the major breakthroughs in the field of psychiatry in 1975?



BIBLIOGRAPHIC INSTRUCTION UNIT #3:  
THE CARD CATALOG AND SUBJECT HEADINGS

Purpose:

The overall pattern for knowledge was presented in Unit #2, so this unit and each subsequent one will examine the individual resources available in the LRC and how to use them. The instructor will lecture on the parts of the catalog card and the uses which the student can make of each part in his research.

The Library of Congress subject headings will be explained and use of the book which lists these headings will be demonstrated. Use of the listing of subject headings assures that the student looks for materials under only those subject headings which are valid.

Objectives:

1. The student will be able to identify the purpose and parts of the catalog card.
2. The student will list the types of catalog cards, i.e. author, title, or subject.
3. The student will be able to identify the number of cards which have been made for a book or audiovisual material.
4. The student will explain what the Library of Congress book of subject headings is and use that book effectively.

Activities:

1. Students will be given authors and/or titles and will be expected to write the collation, the number of catalog cards made for the book or audiovisual material, and list the cards made.
2. Students will be given a list of subject headings to look up in the Library of Congress subject headings book and determine if the heading is valid or another should be used. The student will also give the page on which the answer is found. (Given a general subject, what is the specific Library of Congress subject heading under which it will be found?)

UNIT #3 ACTIVITIES

Each student will be given one of these questions. For Questions 1-18, the student will be expected to give the complete collation for the book or audiovisual material, the number of catalog cards made for the material (including subjects and added entries), and list each subject or added entry made. For those students given Questions 19-27, they must give the answer to the question, the appropriate subject heading, and the page in the Library of Congress Subject Headings, where they found the answer.

1. Leon Bernard's book, The Emerging City
2. Duncan Aikman's The Taming of the Frontier
3. The American West: Myth and Reality, a sound filmstrip
4. Ray Bradbury's Long After Midnight
5. Charles Robert Darwin's Charles Darwin's Natural Selection
6. William G. Farrar's Historic Profiles of Fort Massac
7. Caroline (Pafford) Miller's Lamb in His Bosom
8. Richard Philip's cassette, The Male Dancer
9. William Stevens tape, The Emotive Theory of Ethics
10. Mike Whorf's cassette, The Great Ritual: Customs of Marriage
11. Colin Clark's book, Starvation or Plenty?

UNIT #3 ACTIVITIES Continued

12. Alexander Simon's book, Crisis and Intervention
13. Erickson, John, The Road to Stalingrad
14. Bridget Ann Henisch, Fast and Feast: Food in Medieval Society
15. Harley-Granville, Granville Barker, A Companion to Shakespeare Studies
16. William A. Jensen, Cell Ultrastructure
17. Kenneth Koch, Wishes, Lies, and Dreams: Teaching Children to Write Poetry
18. Richard E. Rubenstein, Rebels in Eden: Mass Political Violence in the U.S.
19. I want to find out something about discotheques; under what should I look? What if I wanted to know something about discotheques in San Francisco, California? How would I find it?
20. What is the subject heading for the Jewish Holocaust that occurred in World War II, as shown in a TV presentation not too long ago? What are some related subjects?
21. Under what subject would I find things listed about espionage in business? Give me three headings not to use.
22. My landlord is trying to evict me. If I looked under eviction, would I find this subject heading used?
23. If I looked under the heading "Inland Water Transportation", would I find materials listed about shipping on individual lakes or rivers?
24. I want to find something about Abraham Lincoln's personality. Under what subject heading do I look?
25. I want to find something out about motorcycling. Under what subject heading do I look?
26. I want to know what training to do for good skiing. Under what heading will I find things listed?
27. Where would I find things on George Washington's farewell as commander-in-chief of the army?

## BIBLIOGRAPHIC INSTRUCTION UNIT #4: INDEXES

Purpose:

The instructor will give a presentation and a handout of the purpose and use of indexes in general. The students will actually be teaching each other about the specific indexes. By groups of students explaining each index and its characteristics, those things which the students themselves feel are important will be brought out. To ensure that major characteristics of each index are not overlooked, the questions which have been selected require that the students note certain significant aspects of that particular index.

Objectives:

1. The student will be able to explain what an index is and its purpose.
2. The student will look at different indexes and determine the audience for that index, as well as the purpose.
3. The student will be able to use a given index to find the answer to a question.

Activities:

1. Groups of these students will be given a question to be answered using a specific index. They will tell where they found the answer and how they found it.
2. The students will explain to the class the purpose, the intended audience, and the usage of the index which they used in answering their question.

## UNIT 4: CHOOSING AND USING A PERIODICAL INDEX

In order to choose the right index for a particular problem, it is necessary to analyze the question:

1. What is the nature of the question?
  - a. Does it concern a topic or a person too new to be discussed in books?
  - b. Is it a topic so limited in appeal that it does not receive treatment in a book?
  - c. Is it a topic which is treated in a book but about which more recent information is needed?
  - d. Is it a topic which would be clarified by the discussions in one or more periodicals?
2. In what area does the problem belong?
  - a. History
  - b. Literature
  - c. Education
  - d. General
3. Which of the periodical indexes covers the literature of the area in question?
4. What years are involved, and which indexes cover those years?
5. Is an article from a general periodical, an article from a professional journal, or an article from each kind required?

## QUESTIONS ON INDEXES FOR UNIT #4

1. Social Sciences Index

I would like a 1976 book review of Mr. D. Jackson's book, entitled Do Trade Unions Cause Inflation?

2. Reader's Guide to Periodical Literature

Where can I find examples of situations where police psychology has been used? I want current information, such as those sources written between March, 1976 and February, 1977.

3. Public Affairs Information Service

I need a 1975 or 1976 book on Polish-American politics in Chicago, covering the period from 1888-1940.

4. Business Periodicals Index

I want to write a paper on the process or methods used in assembly lines. Please give me a list of business magazine articles on the topic that were written between August, 1976 and July, 1977.

5. Essay and General Literature Index

I need some short articles on the psychological aspects of death. The articles should have been from books done recently, say in 1977.

6. Art Index

I would like to lacquer some objects I own. Where can I find an article on the technique of lacquering? The article must have been written between November, 1975 and October, 1976.

7. Applied Science & Technology Index

Where can I find some recent (1976) articles on the process of testing the structure of paper?

8. Bibliographic Index

Where can I find a list of articles on research in marriage? The lists can be from books, pamphlets, or periodicals, but must be written in 1976 or 1977.

9. Cumulative Index to Nursing and Allied Health Literature

The doctor whom I work for would like me to provide him some information on the process of skin transplantation. Where can I find some current articles on the subject, written during 1977?



BIBLIOGRAPHIC INSTRUCTION UNIT #5:  
MAGAZINES, MICROFORMS, NEWSPAPERS, VERTICAL FILE, VOCATIONAL FILE

Purpose:

The instructor will teach how to determine the similarities and differences between magazines and journals. These similarities and differences will be demonstrated by the instructor comparing The Harvard Business Review (a journal) and Business Week (a magazine). Treatment of topic, scope, audience, authority, and format of the two periodicals will be studied in depth in order to give the student a model for his own class group presentation.

Objectives:

1. The student will be able to list similarities and differences between magazines and journals.
2. The student will determine the purpose of periodicals.
3. The student will locate materials found in a magazine, journal, microform, newspaper, vertical file, or vocational file.
4. The student will examine newspapers and periodicals from foreign countries to note similarities and differences to ones of the same type published in the U.S.A.

Activities:

1. Students, in groups of three, will be given a journal and a magazine to determine the audience and purpose, as well as similarities and differences between them.
2. Students, in groups of three, will examine periodicals and journals from the U.S. and foreign countries and write the similarities and differences of them.

3. Students, in groups of three, will examine The Chicago Tribune and The New York Times indexes and note the similarities and differences between them. They will also explain how to use them.
4. Students, in groups of three, will look at the vocational and vertical files and explain what the purpose of each one is and how to use it.

## UNIT #5 QUESTIONS

1. Compare and contrast Psychology Today and The American Psychologist. Which periodical would a psychologist looking for complete explanations of research findings be most likely to use?
2. Compare and contrast Popular Science and Scientific American. Which would a person who wants to know what is new in science use to find a non-technical explanation?
3. Compare and contrast The Harvard Business Review and Nation's Business. Which one would be used by the businessman interested in keeping up with new developments in the business world?
4. Compare and contrast The Christian Science Monitor, The Manchester Guardian Weekly and The Chicago Sun-Times or Chicago Tribune. Identify the major audience for each newspaper.
5. Explain how to use The New York Times Index and The Chicago Tribune Index.
6. Compare and contrast The American Journal of Sociology and Society. Which would the practicing sociologist be most likely to use?
7. Compare and contrast The Phi Delta Kappan and The Education Digest. Which would be used to find out in-depth and scholarly information on topics in education?
8. Explain what is the vertical file and how to use it.
9. What is the vocational file? How do you use it?

## BIBLIOGRAPHIC INSTRUCTION UNIT #6: ENCYCLOPEDIAS

Purpose:

The instructor will discuss arrangement, scope, authority, audience, and usage of encyclopedias in a general sense. The students will then be called upon to answer a question on specific encyclopedias. The students will also be required to write a description of that particular encyclopedia, making sure to cover those points discussed by the instructor in the introductory presentation.

Objectives:

1. The student will be able to use an encyclopedia effectively to locate information on a topic.
2. The student will examine encyclopedias and determine the extent to which a topic is covered. Is it short, lengthy, scholarly, etc.?

Activities:

1. The student will examine a given encyclopedia and write out his findings on the following points: authoritativeness, purpose, audience, scope, (comprehensive or narrow coverage), currentness, strong points, physical approach to usage (Is arrangement alphabetical, letter-by-letter, or word-by-word?).
2. The student will be given a question, to be answered using a specific encyclopedia.

## QUESTIONS ON UNIT #6:

1. Using the McGraw-Hill Encyclopedia of Science and Technology, find some information on the use of light-emitting diodes in optical communications.
2. Using the International Encyclopedia of the Social Sciences, find something out for me about Margaret Sanger.
3. Using the International Encyclopedia of the Social Sciences, locate a biography on Emile Derkheim.
4. Using the Encyclopedia of World Art, find an article for me on Michalangelo Buonarroti.
5. Using the Encyclopedia of World Art, where can I find an article on Egyptian art?
6. Using the Encyclopedia of Education, where can I find references to role-playing in the classroom as it is used in international business education?
7. Using the Encyclopedia Britannica, find an article on Halloween.
8. Using the World Book Encyclopedia, find out something about Jeannette Piccard.
9. Using the Encyclopedia of Education, where can I find mention of the teaching of spelling according to Noah Webster's simplification approach?
10. Using the McGraw-Hill Encyclopedia of Science and Technology, find an article on seismology.
11. Using the International Encyclopedia of the Social Sciences, find an article on Alcoholics Anonymous group psychotherapy.
12. Using the Encyclopedia of World Art, where can I find a picture (plate) of Michael Erbart, the German sculptor's high altar at Blaubeuren?
13. Using the Encyclopedia of Education, where can I find an article on John Dewey?
14. Using the Great Soviet Encyclopedia, locate an article on Catholicism. What comment does the article make about the number of people said to be Catholics.

15. Using Chamber's Encyclopedia, find an article on Victoria, Queen of England, who lived from 1819-1901. How many children did she have?
16. Using the Chamber's Encyclopedia, locate an article on Sir Winston Leonard Spencer Churchill.
17. Using the World Book Encyclopedia, locate an article on Halloween.
18. Using the Encyclopedia Britannica, find a short article on the Ouachita National Forest in Arkansas.
19. Using the Encyclopedia Britannica, locate a long article on Sir Christopher Wren.
20. Using the World Book Encyclopedia, find an article on the language of Yoruba.
21. Using Chamber's Encyclopedia, find an article on English History.
22. Using the Great Soviet Encyclopedia, find an article on John F. Kennedy.
23. Find an article on World War II using the Great Soviet Encyclopedia. What does the article say was the cause of the war?
24. Using the McGraw-Hill Encyclopedia of Science and Technology, find out where the Clipperton Islands are located and why geologists might be interested in the islands.

BIBLIOGRAPHIC INSTRUCTION UNIT #7: GENERAL REFERENCE BOOKS  
(DICTIONARIES, ALMANACS, YEARBOOKS, AND HANDBOOKS)

Purpose:

The student has learned to use the card catalog, indexes, periodicals, and encyclopedias. The student is now asked to synthesize the techniques which he has acquired in using library materials. He will answer a "detective case," which requires that he look up his clues in general reference books.

Objectives:

1. The student will use eleven reference books to find the answers to clues from the Interpol Case #101.
2. The student will be able to successfully use general reference books to locate information.

Activities:

1. The student will be given "Interpol Case #101" and will be expected to use general reference books to solve the mystery.

## UNIT 7: INTERPOL CASE #101

For more than five years, Interpol has been trying to track down one of its most notorious enemies, a man by the name of Darth Sudoyarn. Raeir Mylil, an American now in charge of the Berlin office of Interpol, considers Sudoyarn to be one of the most influential international criminals the world has ever known. Sudoyarn's interests were in all fields of crime, but his most successful ventures had been in the traffic of illegal drugs.

Mylil had heard, through the grapevine, that Sudoyarn was ready to receive a shipment of pure heroin worth more than three million dollars. One Saturday as Mylil was going over some clues in the case, he received a phone call from his new partner, Riley Shriller, who told him that she had found Shad Traycouth dead in a back alley near the Wall. Traycouth, an American, was one of Interpol's top informers. Before Traycouth died she managed to mumble a few disconnected phrases. Also, Shriller found some scraps of paper in Traycouth's pockets with some strange sort of scribbles on them. The two agents spent that entire night going over those bits of information. When they were finished they were convinced they had all the information they needed to find when and where Sudoyarn was going to make the drug pickup.

Your task is the same as that just completed by Mylil and Shriller. But, you are to gather information in an effort to beat them to the discovery of the month, day, and location of Sudoyarn's drug delivery. All the information can be found in our library by using the different reference tools.



After you have gathered the information, you should try to see if there is something important about it. Be careful. Don't overlook something that may appear insignificant. The person who can make the best conclusion from the information will be the one to solve the mystery.

After you have exhausted clues 1, 2, and 3, come to see me and I will give you your next clue. There are ten clues in all; I will give them to you one at a time. You may take an educated guess at any time, but each incorrect guess will cost you one point. You will start with ten points and work your way down from there.

You must also keep very detailed notes of your information which must include the books you used as well as the process you used. These will be very helpful in reviewing your case.

Case #101 does have a solution and you can find it if you get accurate information and then try to reason carefully.

There is no real time limit on this problem and I would like to talk to you as you investigate to check on your progress. Also, please don't hesitate to come to me if you meet a problem.

THE FIRST THREE CLUES ARE:

1. GREENLAND, TRISTAN DA CUNHA, ST. HELENA
2. THE NUMBER OF REVOLUTIONS AROUND THE EARTH MADE BY RUSSIAN SPACECRAFT, VOSKHOD I ON OCTOBER 12, 1964.
3. THE AVERAGE TEMPERATURE FOR FEBRUARY IN HOUSTON, TEXAS.

4. ERNEST HEMINGWAY: HIS POSTHUMOUSLY PUBLISHED NOVEL (1970)
5. CARTOGRAPHY
6. THE HARPER ENCYCLOPEDIA OF SCIENCE, p. 648
7. OUT TO SEA WHERE IT IS COLD  
YOU WILL FIND THE WHITE GOLD
8. ROCK HUDSON'S BIRTHDAY AND QUEEN ELIZABETH 1 SUCCEEDS TO THE THRONE
9. IF YOU GO FARTHER THAN 300 KILOMETERS, YOU HAVE GONE TOO FAR
10. HALF WAY BETWEEN AARHUS AND MALBORK  
BUT CLOSER TO ROSTOCK AND KOLOBRZEG

List of Reference Books

National Geographic Atlas of the World

Webster's Third New International Dictionary (1971)

Information Please Almanac (1978)

The Harper Encyclopedia of Science (Revised Edition)

Chases' Calendar of Annual Events

Chamber's Encyclopedia

The Weather Almanac

Funk and Wagnall's New Standard Dictionary of the English Language  
(1963)

Instant Almanac of Events, Anniversaries, Observances, Quotations and  
Birthdays for Every Day of the Year

Britannica Atlas

The World Almanac (1978)

Card Catalog

## BIBLIOGRAPHIC INSTRUCTION UNIT #8: THE RESEARCH PAPER

Purpose:

The student will be asked to apply the phases of the "Information Chain" in order to map those steps necessary to find information on a topic for a research paper.

Objectives:

The student will combine the phases in the "Information Chain" and the knowledge gained from using library materials to map the steps in finding information on a research paper topic.

Activities:

The student will be asked to choose a topic for a research paper and then write out (step-by-step) an approach to finding information on that topic.

COM 101  
LIBRARY INSTRUCTION POST-TEST

Name \_\_\_\_\_  
Date \_\_\_\_\_

Circle the correct answer.

1. An example of information residing within the minds of people or groups (Phase I of the Bibliographic Chain) is
  1. An encyclopedia
  2. an institutional resource
  3. an index
  4. none of these
  
2. An example of printed materials which have no intellectual content of their own (Phase III of the Bibliographic Chain) is
  1. an idea
  2. an index
  3. an institutional resource
  4. none of these

Use this catalog card to answer questions 3 to 6.

*D.*
*E.*

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L
58

**Litoff, Judy Barrett.**  
 American midwives, 1860 to the present / Judy Barrett Litoff.  
 — Westport, Conn. : Greenwood Press, 1978.  
 xi, 197 p. ; 22 cm. — (Contributions in medical history ; no. 1 ISSN 0147-1058)  
 An outgrowth of the author's thesis, University of Maine at Orono.  
 Bibliography: p. [153]-191.  
 ISBN 0-8371-9824-0 : \$15.95

I. Midwives—United States—History.    I. Title.    II. Series.

RG960.L58	618.2	77-83893 MARC
Library of Congress	77	

3. The call number of the book is
 

1. A	4. D
2. B	5. E
3. C	6. none of these

4. The subject heading for this book is

- |      |                  |
|------|------------------|
| 1. A | 4. D             |
| 2. B | 5. E             |
| 3. C | 6. none of these |

5. The collation is

- |      |                  |
|------|------------------|
| 1. A | 4. D             |
| 2. B | 5. E             |
| 3. C | 6. none of these |

6. The author is

- |      |                  |
|------|------------------|
| 1. A | 4. D             |
| 2. B | 5. E             |
| 3. C | 6. none of these |

Place the letter of the word in front of its definition:

A reserve material	J circulation desk
B anthology	K magazine
C bibliography	L library
D index	M stacks
E biography	N reference desk
F abstract	O card catalog
G main entry	P vertical file
H periodical	Q microform
I handbook	R audiovisual materials

7. \_\_\_ a collection of pamphlets, clippings, correspondence, or similar material in a drawer or box.
8. \_\_\_ non-book materials such as records, slides, transparencies, etc.
9. \_\_\_ a list of materials by a certain author or on a certain subject.
10. \_\_\_ the area or part of a library in which the books are stored or kept.
11. \_\_\_ a detailed alphabetical list or table of topics mentioned in a book or other material.
12. \_\_\_ a collection of choice extracts having a common characteristic such as subject matter.
13. \_\_\_ an item which is in great demand because of being placed on reading lists and set on one side for very short limited periods of loan.

14. \_\_\_ a written account of a person's life.
15. \_\_\_ that area of a library where materials are charged out, returned, etc.
16. \_\_\_ a place set apart to contain books and other materials for reading, study, or reference.
17. \_\_\_ a file of cards in alphabetical sequence listing the items in a library collection.
18. \_\_\_ a magazine or other journal that is issued at regularly recurring intervals.

Given this entry from the Reader's Guide to Periodical Literature, answer questions 19 through 24.

#### SOILS

##### Phosphorus content.

Detection and examination of anthrosols by phosphate analysis. R. C. Eidt. *bibi il Science* 197:1327-33 S 30 '77

#### SOILS. Potting

Greenhouse; adding aggregates to potting soil. J. Kilborn. *Horticulture* 55:50-1 N '77

#### SOLAR batteries

Solar cells find their niche in everyday life on earth. D. Morris. *il Smithsonian* 8:38-45 O '77

#### SOLAR collectors

Do-it-yourselfers give solar energy a sharp boost. *il U.S. News* 83:96-7 O 17 '77

#### SOLAR energy

Scientists urge President: stop reliance on coal and nuclear fuel; Go for development of uniform solar power. J. E. Persico. *Sci Digest* 82: 8-9+ O '77

Sunshine of your life. R. W. Moss. *il Sci Digest* 82:10-18+ O '77

Toward a solar civilization. F. Von Hippel and R. H. Williams. *bibi il Bull Atom Sci* 33:12-15 O '77

#### See also

Ocean thermal power plants

United States—Energy Research and Development Administration—Ocean Thermal Energy Conversion Program

#### Bibliography

Guide to solar info. L. Gutowski. *il Mech Illus* 73:126-7 N '77

19. "Solar energy" is
  1. the title of the article
  2. the subject heading
  3. the magazine title
20. In the entry circled, "il" is the abbreviation for
  1. illuminated
  2. illustrated
  3. the first word of the title of the magazine
  4. none of these

21. In the entry circled, the title is
1. Science Digest
  2. Sunshine of your life
  3. Solar energy
  4. Illustrated Science Digest
22. In the entry circled, the volume number is
1. 82
  2. 10
  3. 28
  4. 77
23. In the entry circled, the page number on which the article begins is
1. 82
  2. 10
  3. 28
  4. 77
24. "United States--Energy Research and Development Administration--Ocean Thermal Energy Conversion Program" is
1. The title of an article
  2. a related subject heading used in the Reader's Guide
  3. the title of a book
  4. none of these
25. In the entry circled, the month of the magazine in which the article appears:
1. June
  2. July
  3. August
  4. none of these

Circle the correct answer to the following questions on parts of the book.

26. Material that is referred to in the text but not explained fully is found in the
1. preface
  2. appendix
  3. table of contents
  4. index



27. An introduction of the author and his reasons for writing the book are found in the
1. preface
  2. appendix
  3. table of contents
  4. text
28. The listing and explanation of all technical or foreign words not explained in the body of the book is
1. an appendix
  2. an index
  3. a glossary
  4. the preface
29. An outline of the chapters of the book and the page numbers are found in the
1. table of contents
  2. appendix
  3. index
  4. bibliography
30. In order to determine how thoroughly a topic is covered in a book, look up the topic in the
1. glossary
  2. bibliography
  3. index
  4. title page

Assume that you must write a term paper on the topic of "child abuse." Also assume that you don't know anything about "child abuse," not even what is meant by the words. Name the bibliographic or informational sources which you would use to research the topic. Be sure to tell which source you used and why you chose it (or what you hoped to find).

APPENDIX B  
FACULTY QUESTIONNAIRE

QUESTIONS FOR FACULTY INTERVIEW

1. How much time did you spend teaching how to use the library for the term paper?  
Hours \_\_\_\_\_ or class sessions \_\_\_\_\_
2. Did your students attend the general orientation given by the LRC?  
Yes \_\_\_\_\_ No \_\_\_\_\_
3. Do you require the use of sources in your term paper assignment?  
Yes \_\_\_\_\_ No \_\_\_\_\_  
If yes, how many sources? \_\_\_\_\_
4. Check those topics which you cover in teaching how to use the library to do a term paper.

_____ card catalog	_____ vertical file	other, please indicate
_____ encyclopedia	_____ dictionaries	_____
_____ periodical indexes	_____ call numbers	_____
_____ research strategy	_____ subject headings	
_____ newspapers	_____ magazines and journals	

5. Which materials did you use in teaching how to use the library?  
 \_\_\_\_\_ your own  
 \_\_\_\_\_ the textbook  
 \_\_\_\_\_ commercially prepared  
 \_\_\_\_\_ prepared A-V materials  
 \_\_\_\_\_ other, please indicate \_\_\_\_\_
6. Have you ever taken any courses dealing with the use of the library?  
Yes \_\_\_\_\_ No \_\_\_\_\_
7. Check those methods which you used in teaching the use of the library.  
 \_\_\_\_\_ problem-solving  
 \_\_\_\_\_ hands-on exercises  
 \_\_\_\_\_ lecture  
 \_\_\_\_\_ discussion  
 \_\_\_\_\_ other, please indicate \_\_\_\_\_

ANSWERS FROM FACULTY INTERVIEW WITH THE  
PROFESSOR OF THE CONTROL GROUP

1. How much time did you spend teaching how to use the library for the term paper? Hours \_\_\_\_\_ or class sessions . 4 weeks or 8 class sessions.

2. Did your students attend the general orientation given by the LRC?  
Yes  No \_\_\_\_\_

3. Do you require the use of sources in your term paper assignment?  
Yes  No \_\_\_\_\_ If yes, how many sources? 3 sources minimum; one must be a book and one must be a periodical.

4. Check those topics which you cover in teaching how to use the library to do a term paper.

<input checked="" type="checkbox"/> card catalog	<input checked="" type="checkbox"/> vertical file	other, please indicate
<input type="checkbox"/> encyclopedia	<input type="checkbox"/> dictionaries	_____
<input checked="" type="checkbox"/> periodical indexes	<input type="checkbox"/> call numbers	_____
<input type="checkbox"/> research strategy	<input type="checkbox"/> subject headings	_____
<input checked="" type="checkbox"/> newspapers	<input checked="" type="checkbox"/> magazines and journals	

5. Which materials did you use in teaching how to use the library?

your own  
 the textbook  
 commercially prepared  
 prepared A-V materials  
 other, please indicate \_\_\_\_\_

6. Have you ever taken any courses dealing with the use of the library?  
 Yes  No

7. Check those methods which you used in teaching the use of the library.

problem-solving  
 hands-on exercises  
 lecture  
 discussion  
 other, please indicate \_\_\_\_\_

ANSWERS FROM FACULTY INTERVIEW WITH THE  
PROFESSOR OF THE EXPERIMENTAL GROUP

1. How much time did you spend teaching how to use the library for the term paper? Hours \_\_\_ or class sessions 8.
2. Did ~~you~~ students attend the general orientation given by the LRC?  
Yes  No
3. Do you ~~require~~ the use of sources in your term paper assignment?  
Yes  No  If yes, how many sources? 8 resources and 5 footnotes.
4. Check those topics which you cover in teaching how to use the library to do a term paper.
 

<input checked="" type="checkbox"/> card catalog	<input checked="" type="checkbox"/> vertical file	other, please indicate
<input checked="" type="checkbox"/> encyclopedia	<input checked="" type="checkbox"/> dictionaries	_____
<input checked="" type="checkbox"/> periodical indexes	<input checked="" type="checkbox"/> call numbers	_____
<input checked="" type="checkbox"/> research strategy	<input checked="" type="checkbox"/> subject headings	
<input checked="" type="checkbox"/> newspapers	<input checked="" type="checkbox"/> magazines and journals	
5. Which materials did you use in teaching how to use the library?
  - your own
  - the textbook
  - commercially prepared
  - prepared A-V materials
  - other, please indicate \_\_\_\_\_
6. Have you ever taken any courses dealing with the use of the library?  
 Yes  No
7. Check those methods which you used in teaching the use of the library.
  - problem-solving
  - hands-on exercises
  - lecture
  - discussion
  - other, please indicate \_\_\_\_\_

APPENDIX C

FOLLOW-UP LETTER AND EVALUATION FORM



## Moraine Valley Community College

10900 South 88th Avenue, Palos Hills, Illinois 60465, (312) 974-4300

November 16, 1981

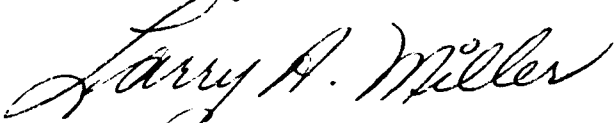
Dear former COM 101 Student:

In the fall of 1980, you enrolled in a COM 101 course at Moraine Valley Community College. Students enrolled in that course were part of a study involving library instruction.

I would like to ask your help in evaluating the library unit taught in that COM 101 class. Enclosed is a survey. By answering the survey, you will help us decide to keep, revise, or eliminate those sections concerning library instruction.

Please use the stamped, self-addressed envelope to return the survey by December 4, 1981. Thank you for your cooperation in this study of library instruction.

Sincerely,



Larry A. Miller  
Assistant Librarian  
Moraine Valley Community College  
Learning Resources Center

Enclosures

Envelope  
Survey

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**Board of Trustees:**

Cecilia J. Kumarich, Chairman  
Dianne G. Masters, Vice Chairman  
Patricia J. Fleming, Secretary

Lee A. Harris  
Joseph F. Heffernan  
Burton S. Odelson  
Maureen Pecor

Marybeth Michener, Student Member

Dr. James D. Koeller, President

1. Are you presently a student at MVCC? (check one)  Yes  No  
 If no, is it because you: (check one)  are at a four-year school 118  
 are at another two-year school  
 have personal reasons  
 accomplished your goal  
 work full time  
 other, please specify \_\_\_\_\_

2. Sex: M  F

Please circle that response which best describes your answer to the question.

	Very <u>Much</u>	<u>Somewhat</u>	Very <u>Little</u>	Not at <u>all</u>	No <u>Opinion</u>
3. Did you like the library units?	1	2	3	4	5
4. Did the library unit help you do better in other courses?	1	2	3	4	5
5. Did the library unit include information which you didn't know before?	1	2	3	4	5
6. Did the library unit help you write your term paper?	1	2	3	4	5
7. Did the library unit help you write your other COM papers?	1	2	3	4	5
8. Did the library unit include information which you can use for other than school assignments?	1	2	3	4	5
9. Did the library unit help you to use other libraries besides the MVCC LRC?	1	2	3	4	5
10. Did you find the library unit on the card catalog useful?	1	2	3	4	5
11. Did you find the unit on encyclopedias useful?	1	2	3	4	5
12. Did you find the unit on indexes useful?	1	2	3	4	5
13. Did you find the unit on the search strategy useful?	1	2	3	4	5
14. Did the LRC tour seem worthwhile?	1	2	3	4	5
15. Did you find "hands on" working with library material helpful in learning about search?	1	2	3	4	5

Please check yes or no.

- |  | <u>Yes</u> | <u>No</u> |
|--|------------|-----------|
| 16. Did you have instruction on the use of the library in elementary or high school?   | ___        | ___       |
| 17. Did you like the method your instructor used to teach you about the library?   | ___        | ___       |
| 18. Did the method your instructor used to teach you about the library help you learn?   | ___        | ___       |
| 19. Check those methods which you like to see used in teaching how to use libraries: problem solving ___ hands-on exercises ___ lecture ___ discussion ___ other (please specify) _____. |            |           |
| 20. Which library unit(s) didn't you like? _____.  |            |           |
| 21. Which library unit(s) did you like? _____.   |            |           |
| 22. My COM 101 library instruction could have been more helpful if there had been _____.   |            |           |



APPENDIX D  
DESCRIPTION OF SAMPLING

## DESCRIPTION OF EXPERIMENTAL AND CONTROL GROUPS

<u>Treatment</u>	<u>N</u>	<u>Sex</u>	
		<u>M</u>	<u>F</u>
Experimental	76	38	38
Control	63	21	42

## YEAR-OF-BIRTH

<u>Year</u>	<u>Experimental</u>	<u>Control</u>
1947	1	1
1948	1	
1949		1
1950		2
1951		2
1952		4
1953		1
1954	1	1
1955		3
1956		2
1957	2	2
1958	3	2
1959	1	6
1960	6	4
1961	15	10
1962	<u>46</u>	<u>22</u>
N	76	63
Median	1961.71	1960.55

APPROVAL SHEET

The dissertation submitted by Larry A. Miller has been read and approved by the following committee:

Dr. Robert C. Cienkus, Director  
Associate Professor, Curriculum and Instruction  
Loyola University of Chicago

Dr. Barney M. Berlin  
Associate Professor, Curriculum and Instruction  
Loyola University of Chicago

Dr. Robert Ennen  
Director of Libraries  
Loyola University of Chicago

The final copies have been examined by the director of the dissertation and the signature which appears below verifies the fact that any necessary changes have been incorporated and that the dissertation is now given final approval by the Committee with reference to content and form.

The dissertation is therefore accepted in partial fulfillment of the requirements for the degree of Doctor of Education.

12/27/82  
Date

Robert C. Cienkus  
Director's Signature