

1994

## The Effectiveness of a HyperCard Library Tour for Middle School Students

Kathryn R. Kunzman

*Let us know how access to this document benefits you*

Copyright ©1994 Kathryn R. Kunzman

Follow this and additional works at: <https://scholarworks.uni.edu/grp>

---

## The Effectiveness of a HyperCard Library Tour for Middle School Students

### Find Additional Related Research in UNI ScholarWorks

To find related research in UNI ScholarWorks, go to the collection of [School Library Studies Graduate Research Papers](#) written by students in the [Division of School Library Studies](#), Department of Curriculum and Instruction, College of Education, at the University of Northern Iowa.

THE EFFECTIVENESS OF A HYPERCARD LIBRARY TOUR  
FOR MIDDLE SCHOOL STUDENTS

A Graduate Research Paper  
Submitted to the  
Division of Library Science  
Department of Curriculum and Instruction  
In Partial Fulfillment  
of the Requirements for the Degree  
Master of Arts

UNIVERSITY OF NORTHERN IOWA

by  
Kathryn R. Kunzman  
March 21, 1994

This Research Paper by: Kathryn R. Kunzman

Titled: The Effectiveness of a HyperCard Library Tour  
for Middle School Students

has been approved as meeting the research paper requirement  
for the Degree of Master of Arts.

Leah Hiland

March 29, 1994  
Date Approved

Graduate Faculty Reader

Barbara R. Safford

March 29, 1994  
Date Approved

Graduate Faculty Reader

Peggy Ishler

April 6, 1994  
Date Approved

Head, Department of Curriculum  
and Instruction

## Table of Contents

|   | Page |
|---|------|
| List of Tables. . . . .                           | iv   |
| List of Figures . . . . .                         | v    |
| Chapter   |      |
| 1. Introduction . . . . .                         | 1    |
| Purpose. . . . .                                  | 2    |
| Problem. . . . .                                  | 3    |
| Definitions. . . . .                              | 4    |
| Limitations. . . . .                              | 6    |
| 2. Literature Review. . . . .                     | 7    |
| 3. Methodology. . . . .                           | 19   |
| 4. Analysis of the Data . . . . .                 | 26   |
| 5. Conclusions, Recommendations, Summary. . . . . | 31   |
| Bibliography. . . . .                             | 36   |
| Appendixes  |      |
| A. HyperCard Stack (print version). . . . .       | 41   |
| B. Orientation Post-Test. . . . .                 | 46   |

## Tables

|  | Page |
|--|------|
| Table  |      |
| 1. Data Comparison:<br>Library Orientation Test. . . . .                                       | 27   |
| 2. Data Comparison:<br>National Percentile Rankings<br>on Iowa Tests of Basic Skills . . . . . | 30   |

## Figures

| Figure   | Page |
|--|------|
| 1. Range of Correct Responses to Post-Test. . . . .                                | 26   |
| 2. Range of National Percentile Rankings<br>on Iowa Tests of Basic Skills. . . . . | 29   |

## Chapter 1

### Introduction

The microcomputer and its decline in price have added a wonderful tool to the resources of the library media specialist. Computer-assisted instruction (CAI) has been extensively researched and found to have very positive benefits for the educational community.

David Thomas (1979) painted a positive picture for CAI in secondary schools. Achievement gains, retention, and a positive attitude toward computers and the subject being taught were the advantages listed in his study. He cited a problem with costs, which have decreased since his study (p. 111).

In 1989 Kulik and Kulik conducted a meta-analysis of 254 comparative studies: 48 in elementary schools, 51 in high schools, 123 in universities, and 32 in adult education settings. They found that CAI has had positive effects on students; students learned more in classes and liked their classes better. Students also developed a more positive attitude toward computers (p. 157).

Computers and CAI are used in libraries for orientation and instruction purposes. Several studies conducted at the university level have shown positive results: Lawson (1989, p. 71) found the CAI program an effective alternative to the traditional library orientation tour. Nipp and Straub (1986)



showed that students enjoyed their library tour program and increased their skills to the same level as students who had received lecture-exercise orientation to the campus libraries, with staff time then reserved for instruction at more advanced levels (p. 60). And Philipson, Kautz, and Rodkewich (1988) developed a CAI program combined with interactive video to solve the common problem of boredom and lack of practical application in library instruction. They found that it was not only acceptable to students, but was their preferred method for learning to use the library (p. 19). Testing was an important step in their development of the program.

The true potential of CAI has become even more evident with the development of the HyperCard program in 1986 by Apple Computers Inc. Lamb (1990a) described HyperCard as an authoring tool that puts the power of courseware development into the hands of media specialists (p. 32).

Bourne (1990) summarized the advantages of CAI, by calling it a superior way to learn. She pointed to the increasing popularity of CAI programs, because new computer applications such as HyperCard "offer students a more challenging and varied learning experience and offer librarians an effective alternative to traditional tours, lectures, and in-class assignments" (p. 169).

#### PURPOSE

Goodrell Middle School is located in Des Moines, Iowa, and has over 100 students transferring into the school during

each year. The researcher perceived a need to develop a method to be certain that all incoming students receive orientation to the school library.

A HyperCard stack was developed to be used with the students transferring into Goodrell Middle School after the traditionally scheduled library orientation visits of language arts classes. This stack will now also be available to all students who might wish to find an answer when no one is immediately available, who feel uncomfortable asking anyone, or who simply might wish to explore the stack.

#### PROBLEM STATEMENT

Is a HyperCard Library Tour as effective a method of library orientation as the traditional library orientation for students at Goodrell Middle School?

#### HYPOTHESIS

The researcher predicted that there would be no significant difference at the .05 level between the traditional library orientation and the HyperCard Library Tour as measured by a comprehensive post-test.

#### ASSUMPTIONS

The basic assumptions that the researcher held regarding this study were:

1. Students need library orientation information to be successful in their learning experiences at Goodrell Middle School. Reading, social studies, and science teachers all require use of the library for various projects. The number

of teachers using library resources is increasing, as they become more involved in resource-based teaching.

2. Students enjoy using the computer. This has been alluded to in many of the research studies and documented in a 1985 meta-analysis done by Bangert-Drowns, Kulik, and Kulik (p. 65).

3. Students are able to use the computer to follow a CAI program. CAI has been used and studied at all levels of instruction, but as with any method of instruction, the program must be carefully designed (Kulik and Kulik, 1989, p. 159).

4. The HyperCard program has been designed as adequately as the traditional instruction.

#### SIGNIFICANCE

Few published studies, articles, and HyperCard template stacks are available for middle school level students. This study may assist others in preparing stacks for their students to use, and will certainly serve as a basis for future HyperCard development by the researcher.

#### DEFINITIONS

For the purposes of this study, the following definitions were used:

CAI (Computer-Assisted Instruction) is "a system of individualized instruction in which a computer provides programmed instructional material. The computer provides the learner with self-paced steps resulting in gradual increments in learning and immediate feedback of the learners mistakes,

allowing learning with minimal intervention from a teacher" (ALA Glossary . . . , 1983, p. 53). For this study CAI will also include such similar terms as Computer-Based Instruction and Computer-Managed Instruction.

HYPERCARD is "a piece of software that provides the user with access to decks of cards containing text and graphic elements which can be easily arranged and rearranged into a variety of combinations producing exciting new programs" (Gray, 1989, p. 39).

STACK(s) are a collection of related cards. Stackware is defined as HyperCard stacks developed by users that may be shareware, commercial products, or public domain software (Gluck, 1989, p. 195). For this study the term stacks will be used to include stackware.

LIBRARY ORIENTATION is "an information service to a group designed to introduce potential library users to the facilities, organization and services of a particular library" (ALA Glossary . . . , 1983, p. 132).

MIDDLE SCHOOL is a public school containing the grades six, seven and eight, in this study, specifically, Goodrell Middle School in Des Moines, Iowa.

HYPERCARD LIBRARY TOUR is a CAI program that students can follow at their own pace, which provides the basic library rules and regulations.

TRADITIONAL LIBRARY ORIENTATION at Goodrell Middle School is accomplished by scheduled language arts class

visits to acquaint the students with the basic rules and regulations of the library.

#### LIMITATIONS

An orientation program must be designed for the specific Library Media Center in which it will be used. The location for this experimental study was limited to Goodrell Middle School in Des Moines, Iowa, for which the HyperCard Tour was designed.

The population groups studied was limited to transfer students (of all three grade levels) and sixth grade students, since seventh and eighth grade students would have retained information about the Library Media Center from prior years' visits and from experience in using the Center.

## Chapter 2

### Literature Review

The researcher initially reviewed the area of CAI; but for this study, this review will be confined specifically to:

1. Uses of HyperCard in elementary and secondary schools.
2. HyperCard library tours.
3. General guidelines for CAI design.
4. Guidelines for selection, development and evaluation of HyperCard Stacks.

The least amount of information was found regarding HyperCard use at the elementary level. The Science Library Catalog is a project developed and tested both at Corinne A. Seeds University Elementary School at University of California, Los Angeles and at Open School, a magnet school in the Los Angeles Unified School District. The Catalog was a browsing interface designed to help the children gain access to the electronic catalog. Their preliminary reports suggested that children could use the simple information retrieval system with reasonable success and that the students were far more persistent than expected. The difficulties appeared to be with the wording of search questions and the children's lack of familiarity with technological terms. This project is being developed further (Walter and Borgman, 1991, p. 159).

Ann Nicol (1990) observed and interviewed children regarding their use of HyperCard at two elementary schools in California: the Open School/Vivarium Project in Los Angeles and Sacred Heart School in San Francisco. The children used HyperCard at many levels from simply reading and viewing a stack to authoring materials using all the HyperCard tools, and creating stacks for research reports that included images and sounds. She found that the children collaborated well, taking different roles than traditional group projects required, where the subject matter was divided into pieces. This cooperation led to the students forming multidisciplinary teams which supported individual differences and strengths (p. 154).

In 1991 Carol Felch described her use of HyperCard in a junior high school setting. HyperCard was used there to catalog periodical holdings, vertical file headings, and quick reference. It was also used for its multimedia capabilities with the Election 88 laserdisc. She felt that it allowed the integration of the learning team concept with teachers, learners, and administration (p. 45).

The Knowledge Gateway Project was a learning experience designed to help At-Risk students at Wenatchee High School and Wenatchee Valley Alternative High School, Wenatchee, Washington. Customizing HyperCard's home card provided a specialized desktop to launch other applications. HyperCard was used to provide three basic introductory lessons for the Macintosh computer, which could be explored at a student's

own pace. As students' skills increased, HyperCard's graphic capabilities were employed. The benefits for the students included self-paced learning, greater skill using the Macintosh, greater understanding of the research process and the ethics of citing references as the students used Grolier's Electronic Encyclopedia, greatly improved quality of student writing, and a new appreciation for creative thinking (Jensen, 1991, pp. 27-29).

Cincinnati Country Day School became known as the HyperSchool, because of the faculty's innovative use of HyperCard. With the use of HyperCard, the standard classroom became student centered rather than teacher centered. The teachers learned WITH their students in designing stacks of customized maps, of poetry analysis, and of Egyptian-like art work. Rather than use HyperCard as a presentation tool, it became a construction tool. The prediction for the future was that "school will be the place where knowledge is integrated, synthesized and tested, instead of a place where knowledge is transmitted from those who know to those who don't" (Hofmeister, 1990, p. 221).

Grapevine, a multimedia database for students to learn about John Steinbeck's The Grapes of Wrath, was developed at Lowell High School in San Francisco by librarian Robert Campbell (1990) and English teacher Patricia Hanlon. She felt that students grasped issues and possibilities more quickly and found information more efficiently. Although the



activities involved took time and energy, it was definitely worth the effort (p. 286).

Apple Computer, Inc. chose West High School in Columbus, Ohio, as an experimental site in their Apple Classrooms of Tomorrow. The students not only each had a Macintosh computer to work on at school, but also were allowed to take one home. Barry Stebbins (1990) described various applications developed by the students and teachers as a "community of learners" developed (p.8). Stacks were used in science to explain complex concepts new to the students, such as DNA and Mitosis. Animation was used in algebra stacks to solve equations. The advanced computer classes held contests for the best designed HyperCard stacks. Stebbins concluded that HyperCard required much work by its users: learning to think in a logical manner, learning some of the scripting language, and in science learning to use the scientific method to solve problems. HyperCard also empowered the students to find bigger and better ways to do things, forced them to become more organized, and encouraged them to go beyond the assignment (p. 73).

A generalized project under development is the California Library Instruction Project (Farmer, 1993, p. 15). Originally called HyperCard Library Instruction Project, this was an outgrowth of a program developed by California Clearinghouse of Library Instruction. This informal network meets several times a year and has developed an integrated and standardized set of modules for basic library skills'

instruction, which targets the secondary and post-secondary school library user. This project was first presented at the 1991 ALA Conference in Atlanta, and has received the 1991 Apple Library of Tomorrow Award. The project aims to provide an environment that will facilitate interactive learning for both students and librarians, and to eliminate duplication of effort, as it serves as a catalyst for librarians to work innovatively together (Farmer, 1991, p. 395).

#### LIBRARY ORIENTATION TOURS

When HyperCard was developed in 1986 by Apple Computer Inc., it was tested by their library and information specialists. One of their first uses was a Library Tour, which they felt was a great success, because of patron response, and because it saved the staff time answering directional questions. Their reaction was that it was a great use of the software, which would start a revolution in information management, since HyperCard allows users to organize and use information the way they think (Ertel and Oros, 1989, p. 46).

Most of the research studies of HyperCard library tours have been at the post-secondary level. At Washington College in Chestertown, Maryland, the Miller Library Orientation Tour was developed to provide a novel way for students to be introduced to the library and its services. It was found to be a valuable addition to the traditional methods. Students liked it, and librarians liked it because the students liked it. An unexpected benefit was that it became a public

relations tool, as tour guides showed off the program to campus visitors (Chaffin, 1987, p. 333).

At the University of Maryland, HyperCard provided an introduction to periodical indexes, to procedures for using the library, and to the arrangement of the periodicals throughout the library system. The analysis noted the students' difficulty in navigating the package due to unfamiliarity with HyperCard terms. The students' comments were positive regarding the good graphics, clear text, and self-pacing of the program. The program was then revised to include an opening tutorial in the package (Neuman, 1991, p. 173).

The Penrose Tutorial and Guides were developed for the University of Denver by Virginia Tschanz in 1991. This HyperCard program is available to users, but was not designed to be substituted for personal service. She listed several limiting factors:

1. lack of publicity,
  2. lack of referrals,
  3. close proximity to reference desk which might have made users self-conscious,
  4. limited content and scope of program,
  5. lack of familiarity with Macintosh computers.
- (p. 46)

Her assessment of the program was that despite low usage, ease of use has encouraged further development.

Utah State University's HyperCard library instruction program was called Project Fore. The focus of this project was on the approach to evaluation rather than on the end result. The method of evaluation used was Instructional Product Verification and Revision (IPVR). Following Thiagarajan's concept of Learner Verification Revision that a few individual students using the product should participate in the design, the appropriate revisions were made. They will again implement the program with classes, and further revision will occur as needed (Piette and Smith, 1991, pp.92-93).

At Bowling Green State University in Bowling Green, Ohio, Laurie Sabol (1992) described the development of a HyperCard Library Tour by cooperative effort between the library staff and the computer science class. The main advantage that she cited in her article is having the people create the stack who will be its primary users. Although no specific study was done, positive reviews and compliments warranted calling it a success (p. 69).

The ARCHIMEDES system at the University of Michigan contains seven stacks and was designed to provide quick reference help when librarians are unavailable. The most notable features of this program are: the guidelines they produced, so that new stacks, created by other users in the system, can be consistent with the original ones; and the data analysis aspect, which unobtrusively records time of use and time spent in each stack and automatically analyzes the

data. Ottaviani and Alloway (1992) concluded that users are learning from the system, using it in-depth rather than just scanning information, and that the ability to evaluate the system will determine where new development will take place (pp. 61-62).

Another extensive training system is the one in place at the University of Tennessee. Developed by Bayne and Rader (1992), "New Horizons in Library Training" is composed of seven training units on 14 disks for library employees rather than patrons. It has been widely distributed, and there are plans for further creation of new "generic" units (p. 4).

Aarhus School of Business in Denmark (Byskov & Albretsen, 1991, p. 37), the Health Science Library at the University of Tennessee (Bellamy, 1991, p. 10), Long Beach Library at California State University (Parker, 1990, p. 73), the University of California, San Diego (Wilhite & Dearie, 1990, p. 81), the University of Minnesota Libraries (Hales-Mabry, 1992, p. 17), and the University of Virginia Library (Stephenson, 1992, p. 77) all describe successful university uses of HyperCard library tours, comment favorably on their programs, and look forward to further developments of their tours.

#### GUIDELINES

Computer assisted instruction must follow the same guidelines as effective instruction. Lillie, Hannum, and Stuck (1989) list crucial steps in developing CAI. The lesson should (a) be based on needs assessment or task

analysis, (b) employ clearly stated objectives, (c) be geared to the specific students for whom the lesson is being developed, (d) consider both how people learn and what makes effective instruction, (e) be tightly designed, (f) present information, (g) ask questions and accept responses, (h) provide appropriate feedback, and (i) be formatively evaluated and revised (p. 37).

Loertscher (1986) provides specific directions for CAI. To exploit the capabilities of computers as teaching tools the learning events should be chosen which:

1. Telescope time and images.
2. Provide an active response by the student.
3. Use the computer to generate problems or data.
4. Provide multiple presentation levels for individual students.
5. Provide information storage and retrieval.
6. Provide real-time experiences. (p. 151)

Three studies offer guidelines for stack development. Annette Lamb (1990b) feels that HyperCard has the advantages of easy modification and accessing cards in any order. Like any presentation, it requires planning. The steps she identifies are: (a) Identify a purpose and goal, (b) organize content and consider strategies for presentation, (c) present information and support your points with examples, (d) summarize your conclusions, (e) limit each card to one idea, (f) be consistent, and (g) keep graphics relevant (p. 38).

Brian Dear (1988) asks the following questions concerning stack development:

1. Is HyperCard the right tool or would something else be better?
2. How much time do you have to develop the stack?
3. What do you hope to achieve?
4. Will the stack serve some genuinely useful purpose?
5. Who will be using the stack?
6. Which options do you really need: sound? title page? shadowing? fonts? foreground versus background? visual effects? realism? and forms? (p. 72)

Rutgers University Library of Science and Medicine had initiated three HyperCard CAI tours for college freshman. After noting HyperCard's advantages of individual programming and ease of change, the following requirements were listed for the program: (a) It should contain enough links that users have several options to locate needed information, (b) basic design should be adhered to (keep screens simple, use buttons and fields consistently, and fit appropriate graphics with the text), (c) feedback is important, and (d) simple animation may be used (Kesselman, 1988, p. 42).

Two articles on software selection contain criteria that should be noted in constructing HyperCard stacks, as well as in their selection. Jean Donham (1989) lists content questions:

1. Is the content clear and accurate?
2. Does the content meet an established goal?
3. Is it free of racial, ethnic, or sexual stereotypes?

4. Are feedback, graphics, sound and level of difficulty appropriate?
5. Is it designed to be used without adult intervention? (p. 168)

Mike Gluck (1989) lists similar guidelines for content assessment, noting that each librarian will probably have a specific list depending on the particular library or media center's goals and objectives (p. 49).

Finally Campbell and Hanlon's 1990 essay lists specific considerations when creating stacks for single users, as opposed to those for large groups:

1. Your major concern is to think in terms of paths rather than a single screen.
2. Choosing is essential in interactivity.
3. Give visual clues to show where the user is and how to move about, possibly including a map or an index card.
4. All the cards in the same stack should have the same look to them by using identical text fields or identical type and font.
5. The choices must be understandable, obvious, acceptable, and adequate.
6. Observe users with the stack, and ask for their questions. Trial runs by users are essential. (p. 271)

This review provided a positive basis for this experimental study by citing numerous successful applications of HyperCard Library Tours. The positive reactions of both patrons and library media specialists paralleled the responses to CAI programs. Guidelines for development both of CAI and HyperCard programs established the groundwork for the development of this particular tour. The researcher felt



that, since most of the articles, research studies and HyperCard templates located were done at the post secondary level, there was a definite need for this project that targeted the middle school level.

### Chapter 3

#### Methodology

The purpose of the study was to create a HyperCard Library Tour for Goodrell Middle School and to determine whether it was an effective method of library orientation.

Several examples of library tours were obtained. The HyperCard Library Tour was designed to include the basic information that a student needs to be able to use the Library Media Center. To test the stack's effectiveness, its content must match, as closely as possible, the traditional library orientation information that the students received on their first fall class visits. Only then could the method of delivery be compared.

The stack (see Appendix A) included the following concepts:

- I. Map of the library
  - A. Location of various areas
  - B. Use of specialized areas
- II. Check out procedures
  - A. Information required
  - B. Length of time
  - C. Number of books allowed
- III. Return procedures
  - A. Where
  - B. When possible

- C. Renewals
- IV. Library hours
  - A. Opening
  - B. Closing
- V. Card catalog
  - A. Arrangement
  - B. Call number location
  - C. Type of cards
    - 1. Author
    - 2. Title
    - 3. Subject
- VI. Magazines
  - A. Location
  - B. Use/check out
- VII. Reference books
  - A. Location
  - B. Use/check out
- VIII. Computer use
  - A. Type of computers
  - B. Programs available
  - C. Assistance available
- IX. Dewey Decimal categories
- X. Main menu
- XI. Help
- XII. Exit

Some repetition was used within the stack to add to the convenience of finding information, since the stack was

designed to be used whenever the students wished. On returning for smaller bits of information, they might not wish to search the entire stack to find an answer.

Buttons were indicated by boxes throughout the stack, occasionally with additional reminders. Graphics were incorporated to illustrate different areas and concepts within the stack. Only a few simple sounds were used, so that they did not distract from the overall information presented.

The HyperCard Library Tour Stack was pre-tested by student library assistants and a few transfer students during the 1992-93 school year to make certain the stack was understandable to the students and effective in conveying the necessary information. Minor changes were made, based on conclusions drawn from the observation of students testing the stack and from questioning the individuals regarding their reactions. Research studies of both CAI and HyperCard indicated that this step was invaluable in the development of the stack.

The actual comparison was done during the first semester of the 1993-94 school year. During spring 1993 language arts departmental meetings and August in-service meetings with teachers and counselors, the use of the HyperCard Library Tour with transfer students was arranged.

This timing also allowed the transfers to be more representative of the entire population. During the last

quarter of the year, more disciplinary problems have been involved in the transferring process.

The population for the study was originally defined as the sixth grade students and the transfer students (grades six, seven, and eight) to Goodrell Middle School. Since there are about 225 sixth grade students, and approximately 50 transfer students were anticipated during the first semester, three of the nine sixth grade classes were randomly selected for the comparison of test scores.

An unexpected development in the testing of the program was the low number of transfers involved. Although the entry of approximately 50 students in the fall had been predicted from previous year's transfers of around 100, the fall of 1993 brought only 24. The small number was attributed to a lower overall enrollment. According to Goodrell Middle School's Principal, Dr. Larry Martindale, the school's attendance area has seen a decrease in the number of school age residents as well as an increase in private school enrollment (Martindale, 1994).

Of those 24 transfer students, four had attend Goodrell Middle School the previous year. Their scores were excluded from the study, because of their previous knowledge of the library. Five students, although they completed the tour, transferred out of Goodrell Middle School before they could take the test. This left only 15 students to be included in the experimental group.

To keep the two groups similar in size, only the first of the three randomly selected 6th grade classes was then used in this comparison. This class contained 24 students, who were present both for the instruction and the post-test.

Several designs were considered for this study and the following selected as best:

|                    |                |                |
|--------------------|----------------|----------------|
| EXPERIMENTAL GROUP | X <sub>1</sub> | T <sub>2</sub> |
| CONTROL GROUP      | X <sub>2</sub> | T <sub>2</sub> |

Here X<sub>1</sub> was the HyperCard Library Tour and X<sub>2</sub> was the traditional library orientation.

A pre-test was not given, as the lack of knowledge regarding the Goodrell Middle School Library Media Center and its procedures was important to this study. This also eliminated the interaction of the pre-test with the post-test.

All sixth grade students received the traditional library orientation as their language arts classes were scheduled into the Library Media Center for their first visit on September 1 or 2, 1993. As the instruction was given, the students were informed that a short test would be given later. Following the instruction and during their second visit, the students were given an opportunity to use the Library Media Center and ask questions, if necessary. The HyperCard Library Tour was not available to these students during the testing period.

Transfer students arriving after the first week became the experimental group and used the HyperCard Library Tour for orientation. Transfer students receive a tour of the school on their first day in the building. It had been arranged with the counselors to have each student's tour end in the Library Media Center with sufficient time to use the HyperCard Library Tour before continuing on to class. Their time with the stack was approximately the same as the time taken to instruct the sixth grade students, and they were informed that they would be returning to take a test over the material. They were given the opportunity for questions and comments at the end of their work with the stack, as well as during their subsequent visits with the language arts classes. Several transfer students commented on their enjoyment of the program.

The post-test was administered four weeks following the orientation. The month span between instruction and testing allowed both groups some time for exposure to the library Media Center with their language arts classes. The students in both groups had similar time for questions and experiences in using the Library Media Center.

All sixth grade students were tested during their regularly scheduled class visit on September 27 or 28, 1993. Their papers were corrected in class, so that follow-up instruction could be done immediately to correct misinformation. Their test scores counted as part of their

daily grade. Only test scores from the first randomly selected class were used for this study.

Transfer students were requested to come in during a Homeroom period, four weeks following their use of the stack, to take the test. Their tests were scored and shared with them then to correct errors in information. Their scores were later shared with their language arts teachers.

The post-test (see Appendix B) included the following concepts:

- I. Library hours
  - A. Opening
  - B. Closing
- II. Check out procedures
  - A. Information required
  - B. Length of time
  - C. Number of items allowed
- III. Return procedures
  - A. When possible
  - B. Renewals
- IV. Use of reference books
- V. Use of magazines
- VI. Type of cards in the card catalog
- VII. Location of call number on catalog cards
- VIII. Use of CD-ROM discs with the computers



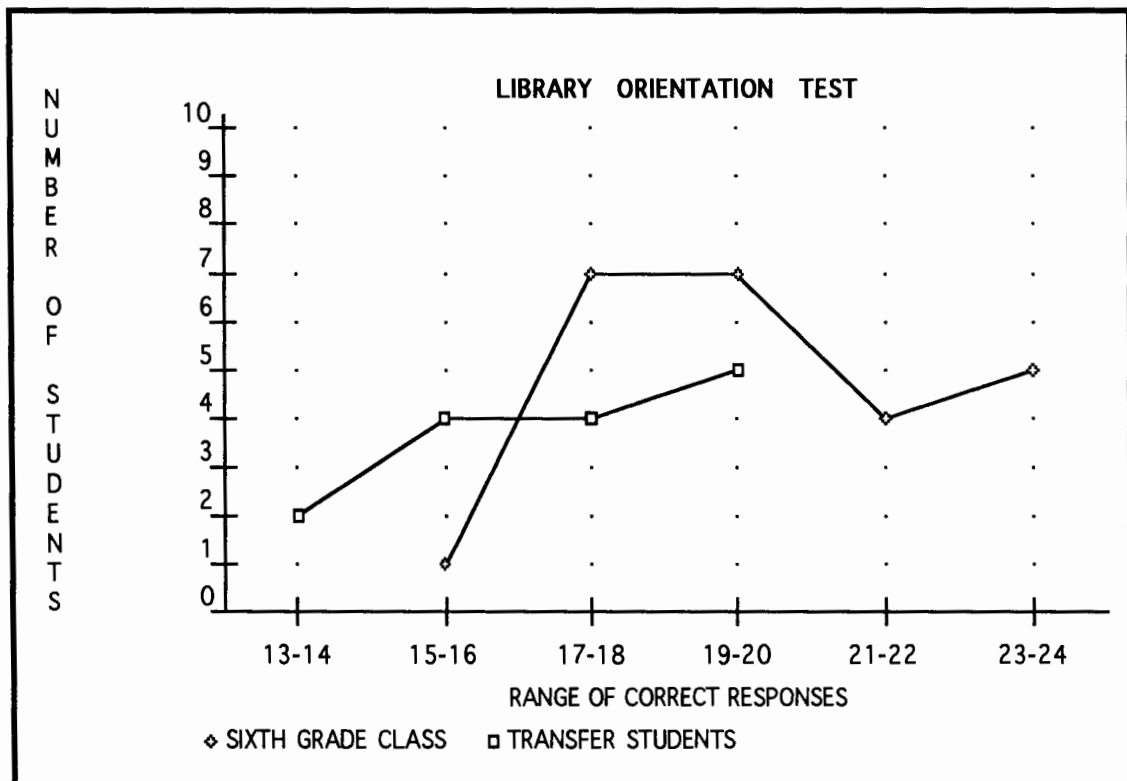
Chapter 4  
Analysis of the Data

The instruction and testing of the sixth grade students took place as scheduled during September 1993. Instruction and testing of the transfer students continued during the first semester.

Figure 1 illustrates the comparison of the number of correct responses by the sixth grade class and by the transfer students.

Figure 1.

Range of Correct Responses to Post-test



As Figure 1 shows, most of the students in both groups scored in the 17 to 20 range of correct responses, which would equate to C's and B's, according to Goodrell Middle School's grading scale. Only one sixth grade student scored lower than that range, however, and nine scored higher. In the transfer group, no students scored higher, and six scored lower. When the group averages are considered, the transfer students did not do as well as the sixth grade class with which they were compared.

The data from the post-test are summarized in Table 1.

Table 1.

Data Comparison: Library Orientation Test

|                    | Sixth Grade Class | Transfers   |
|--------------------|-------------------|-------------|
| Number             | 24                | 15          |
| Mean               | 19.6              | 17.1        |
| Standard Deviation | 2.3               | 2.1         |
| Range              | 10 (15 - 24)      | 8 (13 - 20) |

Standard error of the difference between the means = .71

T-test Score = 3.52, 37 df,  $p = < .05$

The null hypothesis, "There will be no significant difference at the .05 level between the traditional library orientation and the HyperCard Library Tour as measured by a comprehensive post-test", must be rejected. The HyperCard Library Tour was not as effective as the traditional library orientation.

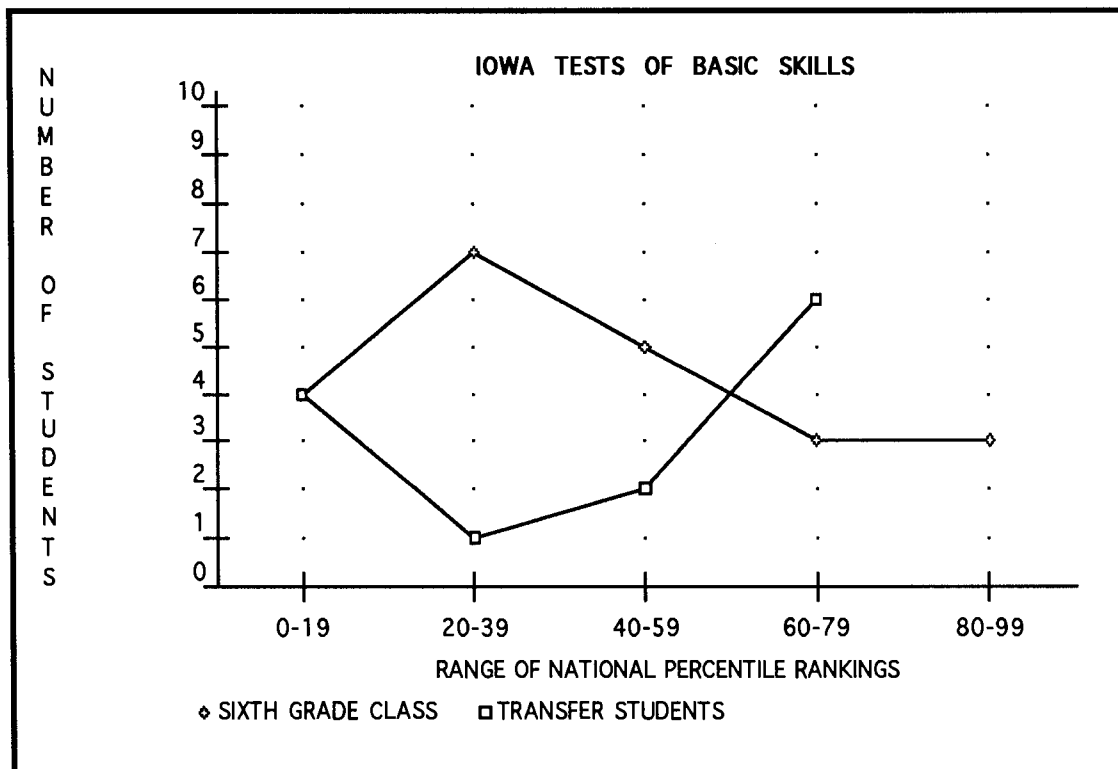
A thorough analysis of the responses to the test questions did not indicate major differences in comparing the content of the two methods of delivery. The test items showing the most number of mistakes with the sixth grade class also logged the most number of mistakes with the transfer students. These were questions #2, #16, and #23 (see test in Appendix B).

In order to understand the differences between the scores, the Iowa Tests of Basic Skills (IBTS) national percentile ranking scores for both groups were examined. These scores are a consistent, basic indicator of the students' ability level, even though the interval since the test was not the same for all students, according to the chair of Goodrell's Counseling Department, Susan Holliday (1994). Sixth grade students' most recent scores were recorded during fourth grade or the 1991-92 school year, while seventh and eighth grade students had scores recorded during the 1992-93 school year. The comparison of the national percentile ranking of the students in the two groups is illustrated by Figure 2.

The number of members in each group is slightly smaller than the number in each test group: 22 in the sixth grade class and 13 in the transfer group. Scores for the other students were unavailable since they were mainstreamed special needs students who had the option of taking Iowa Tests of Basic Skills and who chose not to do so.

Figure 2.

Range of National Percentile Rankings  
on Iowa Tests of Basic Skills



The data from the ITBS scores are summarized in Table 2.

There is no significant difference between the two groups when the ITBS percentile ranking scores are compared. Thus both groups came from the same population.

Table 2.

Data Comparison: National Percentile Rankings  
on Iowa Tests of Basic Skills

|                    | Sixth Grade Class | Transfers   |
|--------------------|-------------------|-------------|
| Number             | 22                | 13          |
| Mean               | 44.6              | 46.3        |
| Standard Deviation | 26.1              | 25.9        |
| Range              | 93 (1 - 93)       | 68 (8 - 75) |

Standard error of the difference between the means = 9.08

T-test Score = .18, 33 df,  $p = > .05$

## Chapter 5

### Conclusions, Recommendations, Summary

#### CONCLUSIONS

The null hypothesis, "There would be no significant difference at the .05 level between the traditional library orientation and the HyperCard Library Tour, as measured by a comprehensive post-test", was rejected. The Tour was not as effective as the verbal instruction.

The item analysis of the test responses was used to determine if there had been major variations in the content between the two methods of delivery. The information was similar: the items most missed by the transfer group were the items most missed by the sixth grade comparison group.

The analysis of Iowa Tests of Basic Skills was used to determine whether the basic learning abilities of the two groups would account for the difference in the test scores. There was no significant difference between the groups' national percentile rankings.

One possible reason that the HyperCard Library Tour was not as effective as the traditional library orientation might be the very nature of the interactivity of this stack. In order to allow the user the freedom to check small portions of the stack for information, there was no attempt to dictate either the order of use or the viewing of the entire stack. When live instruction is given, questions to check

comprehension and observation of student reactions are used, so that immediate reinforcement or correction can be given.

Even though the HyperCard Library Tour was not as effective as the traditional library orientation, it will still serve an important function in the Goodrell Middle School Library Media Center. It will continue to provide orientation for transfer students when the librarian or teacher is involved with other students. It will reinforce the traditional library orientation by being available to all students at all times. It will be an alternative type of instruction for students who either learn better or prefer instruction by computer.

#### RECOMMENDATIONS

The analysis of the corrected tests, item by item, indicated areas of both the HyperCard Library Tour and the traditional library orientation which need greater emphasis. As previous studies indicated, continuous revision is an important element of HyperCard development and use. Future development may include sections on research skills, computer use, and on-line searching. The HyperCard Library Tour may also serve as an example to other middle school library media specialists who wish to create their own tutorial for students.

#### SUMMARY

Computer-assisted instruction has been researched and found to be beneficial in educational programs. The researcher perceived a need to develop a method to be certain

that all incoming students receive orientation to the Library Media Center at Goodrell Middle School in Des Moines, Iowa.

A review of the available literature indicated that HyperCard had been used in library instruction, but most programs developed had targeted post secondary education. Very little was available at the middle school level. This established the need for the development of a program, and the literature provided guidelines for that development.

HyperCard, an authoring program for the Macintosh computer, was used to develop a tutorial program for Goodrell Middle School Library Media Center. During the 1992-93 school year the HyperCard Library Tour was tested by student library assistants, and appropriate changes were made. This step was considered necessary by many previous researchers.

The program itself was tested during the fall of 1993. Students transferring into Goodrell Middle School were the experimental group, and a randomly selected class of sixth grade students served as the comparison group. Sixth grade students were chosen because of their lack of previous knowledge of the library media center.

The sixth grade students received their library orientation information during their regularly scheduled class visits the first week of school. Transfer students used the HyperCard Library Tour during part of their introductory tour of the building. Their time with the Tour was approximately the same as the time taken to instruct the sixth grade students.



A post-test was administered to the sixth grade students during a regularly scheduled class visit one month after their orientation. The post-test was administered to transfer students, individually during a Homeroom period, one month after they used the Tour. The month time span between instruction and testing allowed both groups some time for experience in using the Library Media Center with their language arts classes, and thus both groups had similar experiences in using the Library Media Center.

The tests were scored and compared. With the use of the t-test, the null hypothesis, "There would be no significant difference at the .05 level between the traditional library orientation and the HyperCard Library Tour as measured by a comprehensive post-test", was rejected. The sixth grade class, who received the traditional method of library orientation instruction, scored significantly higher on the post-test.

An analysis of the test, item by item, was done to determine the equality of content of the traditional library orientation and the HyperCard Library Tour. No difference was indicated by the test score analysis.

In an effort to determine if both groups came from the same general student population, the most recent Iowa Test of Basic Skills scores were examined for the students of both groups. The students' national percentile ranking scores were similar, so the learning abilities of the two groups were not a factor.

Although the transfer students did not score as well as the sixth grade students, the researcher felt that the Library Tour would still serve a valid function in reinforcement of the traditional instruction, in providing answers when no one else is available, and in providing an alternative method of instruction for those who prefer it.

## BIBLIOGRAPHY

The ALA Glossary of Library and Information Science.

Chicago: American Library Association, 1983.

Bangert-Drowns, Robert L., James A Kulik and Chen-Lin C. Kulik. "Effectiveness of Computer-Based Education in Secondary Schools." Journal of Computer-Based Instruction 12 (Summer 1985): 59-68.

Bayne, Pauline S. and Joe C. Rader. "New Horizons in Library Training." HyperCard Stacks, University of Tennessee, Knoxville Libraries, 1990.

----- . "New Horizons in Library Training: Using HyperCard for Computer-Based Staff Training." In Macintosh Libraries 5. Edward J. Valauskas and Bill Vaccaro, eds. Cupertino, CA: Apple Library Users Group, 1992.

Beekman, George. HyperCard 2 in a Hurry. Belmont, CA: Wadsworth Publishing Co., 1992.

Bellamy, Lois M. "Of Mice & Macs: Integration of the Macintosh into the Operations and Services of the University of Tennessee, Memphis Health Science Library." In Macintosh Libraries 4.0. Edward J. Valauskas and Bill Vaccaro, eds. Cupertino, CA: Apple Library Users Group, 1991.

Bourne, Donna E. "Computer-Assisted Instruction, Learning Theory, And Hypermedia: An Associative Linkage." Research Strategies 8 (Fall 1990): 160-171.

Byskov, Lene & Jorgen Albretsen. "Business Sense: Using the Macintosh in a Business School Library." In Macintosh Libraries 4.0. Edward J. Valauskas and Bill Vaccaro, eds. Cupertino, CA: Apple Library Users Group, 1991.

Campbell, Robert and Patricia Hanlon. "HyperCard: A New Deal in the Classroom." In Learning with Interactive Multimedia: Developing and Using the Multimedia Tools in Education. Sueann Ambron and Kristina Hooper, eds. Redmond, WA: Microsoft Press, 1990.

Chaffin, Jeff. "Macintosh-Assisted Library Orientation Tour." College & Research Library News 48 (June 1987): 333-334.

- Dear, Brian L. "HyperCard. What Is It?" Byte, Mac Special Edition 13 (August, 1988): 71-75.
- Donham, Jean. "Microcomputers in Libraries: Educational Application and Software Selection." Journal of Youth Services in Libraries 2 (Winter 1989): 167-71.
- Ertel, Monica and Jane Oros. "A Tour of the Stacks: HyperCard for Libraries." Online 13 (January, 1989): 45-53.
- Farmer, Lesley S. J. "Hyperlearning: Library Instruction through HyperCard." Journal of Youth Services in Libraries 4 (Summer, 1991): 393-395.
- "Teaching Skills by HyperCard." The Book Report 13 (November/December 1993): 15+.
- Felch, Carol. "The 'Macintoshed Life'...in a Junior High School Setting." In Macintoshed Libraries 4.0. Edward J. Valauskas and Bill Vaccaro, eds. Cupertino, CA: Apple Library Users Group, 1991.
- Gluck, Myke. HyperCard, Hypertext, and Hypermedia for Libraries and Media Centers. Englewood, CO: Libraries Unlimited, 1989.
- Goodman, Danny. The Complete HyperCard 2.0 Handbook. 3rd ed. NY: Bantam Books, 1990.
- Gray, Robert A. "HyperCard Utilization in Education: Possibilities and Challenges." Tech Trends 34 (January/February, 1989): 39-40.
- Hales-Mabry, Celia. "Project iLLUMINate [sic] at the University of Minnesota Libraries." In Macintoshed Libraries 5. Edward J. Valauskas and Bill Vaccaro, eds. Cupertino, CA: Apple Library Users Group, 1992.
- Hlavsa, Larry B. "Library Demo." HyperCard Template, St. Paul Public Library, St. Paul, MN, 1988.
- Hofmeister, Joseph F. "The Birth of HyperSchool." In Learning with Interactive Multimedia: Developing and Using the Multimedia Tools in Education. Sueann Ambron and Kristina Hooper, eds. Redmond, WA: Microsoft Press, 1990.
- Holliday, Susan. Personal Interview. 4 February 1994.
- Hsu, Leon. "Graphics." HyperCard Template, Ball State University, Muncie, IN, 1988.

- Jensen, Eric. "HyperCard and AppleShare Help At-Risk Students." The Computing Teacher 18 (March, 1991): 26-29.
- Kesselman, Martin. "LSM Infomaster: A HyperCard CAI Program on a Macintosh Network." College & Research Library News 49 (July/August, 1988): 41-44.
- Kulik, James and Chen-Lin C. Kulik. "Effectiveness of Computer-Based Instruction." School Library Media Quarterly 17 (Spring 1989): 156-159.
- Lamb, Annette. "Hyper About HyperCard." School Library Media Activities Monthly 6 (June 1990a): 32-34.
- "Presentations with Pizzaz: Using HyperCard for Desktop Presentations." School Library Media Activities Monthly 7 (September 1990b): 37-39.
- Lance, Kathleen A. "Mary Helen Cochran Library." HyperCard Template, Sweet Briar College, Sweet Briar, VA, 1989.
- Lawson, V. Lonnie. Using A Computer-Assisted Instruction Program to Replace the Traditional Library Tour: An Experimental Study." R Q 29 (Fall 1989): 70-79.
- Lillie, David L., Wallace H. Hannum and Gary B. Stuck. Computers and Effective Instruction: Using Computers and Software in the Classroom. New York: Longman, 1989.
- Loertscher, David V. "Review of Research on Computer-Assisted Instruction." In The Microcomputer Facility and the School Library Media Specialist. E. Blanche Woolls and David V. Loertscher eds. Chicago: American Library Association, 1986.
- Lonowski, Doug. "Library Navigator 1.1." HyperCard Stack, University of Iowa Libraries, Iowa City, IA, 1991.
- Martindale, Larry C. Personal Interview. 12 January 1994.
- Neuman, Delia. "Designing Library Instruction for Undergraduates: Combining Instructional Systems Design and Naturalistic Inquiry." College & Research Libraries 52 (March, 1991): 165-76.
- Nichol, Anne. "Children Using HyperCard." In Learning with Interactive Multimedia: Developing and Using the Multimedia Tools in Education. Sueann Ambron and Kristina Hooper, eds. Redmond, WA: Microsoft Press, 1990.

- Nipp, Deanna, and Ron Straub. "The Design and Implementation of a Microcomputer Program for Library Orientation." Research Strategies 4 (Spring, 1986): 60-67.
- Ottaviani, Jim and James E. Alloway. "Designing and Evaluating ARCHIMEDES: A HyperCard Reference Aid at the University of Michigan." In Macintosh Libraries 5. Edward J. Valauskas and Bill Vaccaro, eds. Cupertino, CA: Apple Library Users Group, 1992.
- Parker, Joan. "Macintosh Computers at Cal State, Long Beach Library: A Brief History." In Macintosh Libraries 3.0. Bill Vaccaro and Edward J. Valauskas, eds. Cupertino, CA: Apple Library Users Group, 1990.
- Philipson, Will D., Barbara Kautz and Patricia Rodkewich. "The Development of a New Library Instruction Concept--ICAIV." Tech Trends 33 (October 1988): 17-21.
- Piette, Mary I. and Nathan M. Smith, Jr. "Evaluating a HyperCard Library Instruction Program." Research Strategies 9 (Spring 1991): 87-94.
- Riley, David. Design for Active Learning with HyperCard 2. Santa Barbara, CA: Intellimation Library for the Macintosh, 1991.
- Sabol, Laurie. "The BGSU HyperCard Library Tour: A Cooperative Effort Between the Library and a Computer Science Class Yields Great Results." Apple Library Users Group Newsletter 10 (April 1992): 65-69.
- Stebbins, Barry. "HyperCard: The Tool for the Classrooms of Tomorrow." Computers in the Schools 7 (1990): 7-73.
- Stephenson, Christie. "HyperCard VIRGO Training." In Macintosh Libraries 5. Edward J. Valauskas and Bill Vaccaro, eds. Cupertino, CA: Apple Library Users Group, 1992.
- Thomas, David B. "The Effectiveness of Computer-Assisted Instruction Secondary Schools [sic]." AEDS Journal 12 (Spring, 1979): 103-116.
- Traw, Kim. "Library Tour of Cedar Falls High School Library Media Center." HyperCard Stack, [Cedar Falls, IA], 1992.
- Tschanz, Virginia. "Assessment of a HyperCard Program at Penrose Library, The University of Denver." Reference Services Review 19 (Spring 1991): 39-47.

----- . "Penrose Library: Tutorial and Guides."  
HyperCard Template, University of Denver, Denver, CO,  
1989.

Ventura, Fred and Marilyn Grover. HyperCard Projects for Teachers. Newbury Park, CA: Ventura Educational Systems, 1991.

Walter, Virginia A. and Christine L. Borgman. "The Science Library Catalog: A Prototype Information Retrieval System for Children." Journal of Youth Services in Libraries 4 (Winter 1991): 159-166.

Wilhite, Sherry and Tammy Nickelson Dearie. "RoboRef at the University of California, San Diego." In Macintoshed Libraries 3.0. Bill Vaccaro and Edward J. Valauskas, eds. Cupertino, CA: Apple Library Users Group, 1990.

HyperCard Stack

**GOODRELL MIDDLE SCHOOL  
LIBRARY MEDIA CENTER**



CLICK ON ANY BOX BELOW TO LEARN MORE:

- |                      |                      |
|----------------------|----------------------|
| MAP/LOCATIONS        | CARD CATALOG         |
| CHECK OUT PROCEDURES | MAGAZINES            |
| CHECK OUT PERIODS    | REFERENCE            |
| LIBRARY HOURS        | COMPUTER USE         |
| RETURN PROCEDURES    | DEWEY DECIMAL SYSTEM |

### REFERENCE

Always indicated by an R on the top line of the call number.

Includes Almanacs, Atlases, Dictionaries, Encyclopedias, and specialized books and sets of books.

All may be used in the library. Some books may be checked out overnight--you must come in after school and return them before Homeroom in the morning. These have cards and pockets and are marked "OVERNIGHT".

### FICTION

Always indicated by an F on the top line of the call number.

Fiction is make-believe stories of all kinds: animal, fantasy, historical, horror, humorous, mystery, school, science fiction, sports, survival, war, etc.

Fiction is arranged by the last name of the author.

### NON-FICTION

Always indicated by a **Dewey Decimal Number** on the top line of the call number. (Click on the box to review the different categories.)

These are arranged numerically from smallest to largest on the shelves around the outside of the room.

Non-fiction books are true, useful for learning about a certain subject, either for reports or for personal use.

### Dewey Decimal System

Our library uses the Dewey Decimal System of classification. The different categories are:

- 000 **General Works**--unusual, strange
- 100 **Philosophy**--psychology
- 200 **Religion**--world religions, mythology
- 300 **Social Sciences**--government, law, business, education
- 400 **Languages**--dictionaries, grammar

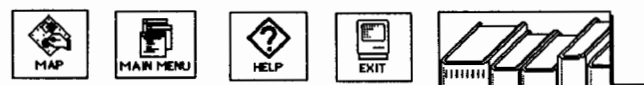
### BIOGRAPHY

Always indicated by an B on the top line of the call number.

Biographies are non-fiction, the true stories of people's lives. (If they are written by the persons themselves, they are called AUTO biographies.)

Biographies are arranged by the name of the person being written about.






## STORY COLLECTIONS

Always indicated by an SC on the top line of the call number.

These are collections of short stories.

Story collections are also fiction.

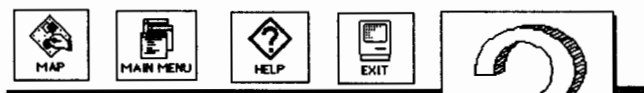


## PAPERBACKS

These are arranged alphabetically by author, just as the fiction is.

Paperbacks are mostly fiction.

BUT they are **NOT** indexed in the card catalog.




## HELP

To locate basic topics, click the main menu button.

To find where an area is located in the library, click on the map button.

To quit the program, click the exit button.


When all else fails, ask the librarian or one of the student assistants. They're here to help, whether



## RETURN PROCEDURES

Books may be returned any time that the library is open. Simply put the book in the book return by the door.

If the book is due and you haven't finished reading it, you may renew it for another two weeks. Simply ask the student assistant or librarian to help you.

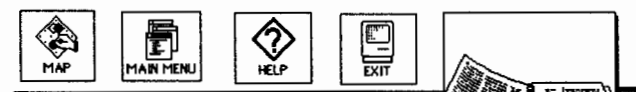


## CHECK OUT PROCEDURES

After locating the book or books you wish to check out, sign your COMPLETE name (both first AND last names) and Homeroom number on the card.

Then bring the card and the book to the desk, so that the librarian or student assistant can stamp due date on the book as a reminder to you.

You may check out two books at a time. If you need more,








## MAGAZINES

Current issues are located on the display racks near the doors to the courtyard.

You may wish to use the National Geographic Index or the Abridged Readers' Guide to locate specific issues on the subject you are interested in.

Back issues are located in the workroom. To see these, ask the librarian or the student assistant for the magazine by







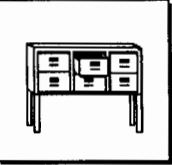
## LIBRARY HOURS

The library media center opens at 7:15 am.

You may use the library before or after school, during your lunch hour, when your teacher sends you to the library with a pass from Homeroom or class, and during scheduled visits by your classes.

Monday, Wednesday, and Friday the library closes at 3:00 pm. If a faculty meeting will be taking place, the librarian



## CARD CATALOG

You may look here to find items, you are interested in.

**AUTHOR** - see the author's last name.

**TITLE** - ignore "a", "an" and "the". (click boxes for examples)

**SUBJECT** - shown by all capital letters.

These are all arranged in alphabetical order, word by word.

The **CALL NUMBER** is located in the upper left-hand corner of the card. This is your guide to finding the book.

### TITLE CARDS



(Ignore "A", "An", and "The")

641.5 Holiday treats  
HAW Hawzig, Esther

427 A Hog on ice  
FUN Funk, Charles E.  
A Hog on ice, and other curious expressions; with illus.

F The Hobbit  
TOL Tolkien, J. R. R.  
The Hobbit; or, There and back again; illus. by the author.

709 History of art for young people  
JAN Janson, H. W.  
History of art for young people [by] H. W. Janson with Samuel Cauman. 2d ed. rev. by Anthony F. Janson. Abrams 1980 41op illus maps \$22.50

### AUTHOR CARDS



(Look under the Author's last name.)

F CRU Crutcher, Chris  
Running loose. Greenwillow Books, 1983.

F COR Cormier, Robert  
The Chocolate war; a novel. Pantheon Books, 1974.

F COL Cole, Brock  
The Goats. Farrar, 1987.

F CHI Childress, Alice  
A Hero ain't nothing but a sandwich. Coward, McCann, & Geoghegan, 1973. 126p \$8.95

### SUBJECT CARDS



(Subjects are in all capital letters.)

F MYSTERY AND DETECTIVE STORIES  
DUN Duncan, Lois  
I know what you did last summer. Little 1973.

743 MONSTERS IN ART  
AME Ames, Lee J.  
Draw 50 monsters, creeps, superheroes, demons,

599 MAMMALS  
VHI Whitaker, John D.  
The Audobon Society field guide to North American

793.8 MAGIC  
BAK Baker, James W.  
Illusions illustrated; a professional magic show for young performers; drawings by Jeanette Swofford; photographs by Carter M. Ayres. Lerner Publs. 1984 120p illus \$10.95

### CALL NUMBERS

(Call numbers are in the upper left hand corner.)

362.7 KRE

612 FAC

290 GAE

944 FRA

581 JAN

909 FOS

SC NEW

F TAY

133 BER

B LIN

F MAZ

419 GRE

B JAC

F DUN



070 JAS

808.88 SCH

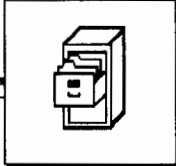
B COS

398.2 PYL

743 FRA

MAP MAIN MENU HELP EXIT




### VERTICAL FILE

These drawers contain clippings and pamphlets on current topics.

These may be used in the library only.

MAP MAIN MENU HELP EXIT




### CHECK OUT PERIODS

Most books are checked out for two weeks. They may be renewed for an additional two weeks when necessary.

Some reference books may be checked out overnight only--they are marked "OVERNIGHT". These can be obtained after school and MUST be returned before Homeroom the next morning.

MAP MAIN MENU HELP EXIT



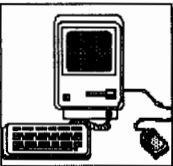
### COMPUTER USE

We have **MACINTOSH COMPUTERS**, an **IBM COMPUTER**, and **APPLE //e COMPUTERS**. (click on boxes for details)

You may use these when you're with a scheduled class or you may sign up for times that the computers are not in use by classes, such as lunch or before or after school.

See the librarian for assistance.

MAP MAIN MENU HELP EXIT

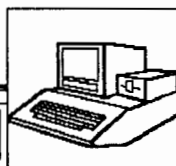


### MACINTOSH COMPUTERS

Our Macintosh computers are located on both sides of the inside window wall, and may be used for:

**creating reports and documents**--Microsoft Works  
**creating signs and banners**--Print Shop, Superprint, CalendarMaker, Pelican Press, or Certificate Maker.  
**reference**--American Heritage Dictionary, Random House Encyclopedia, MacGlobe, various HyperCard Stacks, and CD-ROM discs: Grolier's Encyclopedia, World Fact Book, Time Table of Science and Invention, Birds of America,

MAP MAIN MENU HELP EXIT




### APPLE //e COMPUTERS

Two Apple //e computers are located in the adjoining lab and may be used for:

**creating reports and documents**--Apple Works or Bank Street Writer.  
**creating signs and banners**--Print Shop.  
**drill and practice**  
**educational games**--Oregon Trail.

MAP MAIN MENU HELP EXIT



### IBM COMPUTER

This computer is located in the adjoining lab and may be used to access COMCAT, Heartland's CD-ROM listing of the holdings of the area high school libraries and some of the Des Moines Middle School libraries.

With the modem, we are able to access the Des Moines Public Library and Drake's Library computerized catalogs.

MAP MAIN MENU HELP EXIT

### CIRCULATION DESK

Where you may: (click on boxes for details)

**CHECK OUT**, **RENEW**, or **RETURN** books.

Pay for lost books. Ask for Help.

Request back issues of **MAGAZINES**.

MAP MAIN MENU HELP EXIT

### PROFESSIONAL COLLECTION

Materials are indicated by a P on the top line of the call number.

This room contains books, catalogs, media, and professional journals for teachers to use.

If you need to use this area or items from it, please consult the librarian.

MAP MAIN MENU HELP EXIT

### WORKROOM

Here materials are prepared for your use. Books are numbered and stamped. Cards and pockets are added.

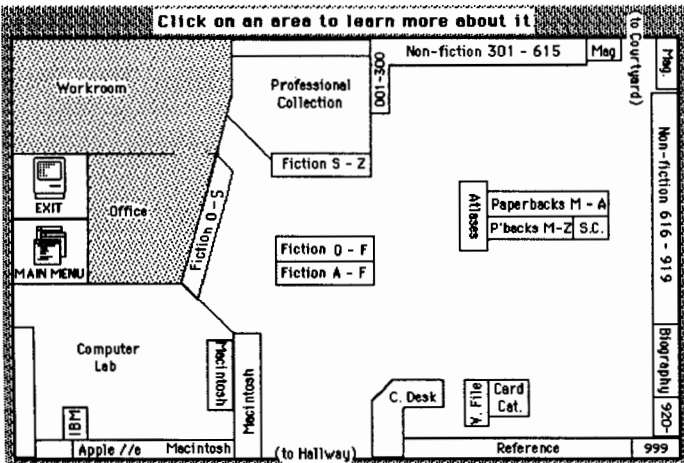
Back issues of magazines are stored here. See the librarian or the student assistants for assistance with them.

MAP MAIN MENU HELP EXIT

### OFFICE

Here the librarian prepares and keeps library records (such as **overdue notices!**).

The selection and technical preparation of materials for your use is also done here.



## ABSTRACT

A library orientation program was needed for transfer students at Goodrell Middle School in Des Moines, Iowa. HyperCard, an authoring program for the Macintosh computer, was used to create the Library Tour during the 1992-93 school year.

During the fall semester of 1993, the HyperCard Library Tour was tested by comparing its use with transfer students to the traditional library orientation given the sixth grade students during their initial classroom visits to the library media center.

Scores of a comprehensive post-test were analyzed by using the t-test. The hypothesis, that there would be no significant difference at the .05 level between the traditional library orientation and the HyperCard Library Tour as measured by a comprehensive post-test, was rejected.

Even though the HyperCard Library Tour was a less effective method of instruction, it will be used as reinforcement for the traditional library orientation at Goodrell Middle School.

## Orientation Post-Test

**HOW WELL DO YOU KNOW GOODRELL'S  
LIBRARY MEDIA CENTER?**

YOUR NAME \_\_\_\_\_ YOUR LANGUAGE ARTS TEACHER \_\_\_\_\_

- X How did you receive your information on the hours, rules and procedures for our library/media center? (mark as many answers as you need to)

\_\_\_\_\_ your friends

\_\_\_\_\_ your language arts/reading teacher

\_\_\_\_\_ your librarian

\_\_\_\_\_ computer program

1. What time does the library open? (only one answer please)

\_\_\_\_\_ 7:00 am.

\_\_\_\_\_ 7:15 am.

\_\_\_\_\_ 7:30 am.

\_\_\_\_\_ 7:40 am.

2. What time does the library close (except for tutoring club nights)?

\_\_\_\_\_ 2:30 pm.

\_\_\_\_\_ 2:45 pm.

\_\_\_\_\_ 3:00 pm.

\_\_\_\_\_ 3:15 pm.

\_\_\_\_\_ 3:30 pm.

3. Most library books may be checked out for how long?

\_\_\_\_\_ overnight

\_\_\_\_\_ one week

\_\_\_\_\_ two weeks

\_\_\_\_\_ three weeks

4. Magazines may be
- checked out overnight
  - used in the library only
  - checked out for two weeks
5. Most library books, after they have been checked out once,
- may be renewed for another two weeks
  - may be renewed for another one week
  - may be renewed for overnight
  - may not be renewed
6. Most reference books may be used only in the library. Those atlases, almanacs, and encyclopedias that are specially marked may be
- checked out overnight
  - checked out for two weeks
7. If you finish a book before the two week due date, you
- must wait until your next class visit
  - may return it anytime and check out more
8. How many books can you check out at one time?
- 1
  - 2
  - 3
  - 4
  - a reasonable number
9. Back issues of magazines are located
- in the workroom
  - with the current issues

10. Back issues of magazines may be  
\_\_\_\_ used only in the library  
\_\_\_\_ checked out overnight
11. To request a back issue of a magazine, you should  
\_\_\_\_ ask the librarian for an article on "Hawaii" or the topic  
for your report  
\_\_\_\_ ask the librarian for a magazine by title and date
12. When you have found a book you wish to check out, you should  
\_\_\_\_ take it to the circulation desk and hand it to the  
librarian or the student assistant  
\_\_\_\_ put your information on the card and then take it to the  
circulation desk
13. What two items information do you put on the card in order to  
check out a book?  
\_\_\_\_ your teacher's name  
\_\_\_\_ your name  
\_\_\_\_ your teacher's room number  
\_\_\_\_ your Homeroom number  
\_\_\_\_ the date
14. To view CD-ROM discs on the computer you should  
\_\_\_\_ see if you can find them  
\_\_\_\_ simply turn on the computer  
\_\_\_\_ ask the librarian or student assistant for help

Indicate true or false for the following statements.

15. T or F      You may use the Goodrell library before school.
16. T or F      You may use the Goodrell library during Homeroom.
17. T or F      You may use the Goodrell library when your teacher  
sends you from class.
18. T or F      You may use the Goodrell library during your lunch  
period.



19. T or F      You may use the Goodrell library after school.
20. T or F      You may use the Goodrell library in the evening.
21. T or F      You may use the Goodrell library on Saturday.
22. How can you look up information in the card catalog?
- \_\_\_\_\_ by author
- \_\_\_\_\_ by title
- \_\_\_\_\_ by subject
- \_\_\_\_\_ all of the above
23. Where do you find the book's call number on a card in the card catalog?
- \_\_\_\_\_ upper right hand corner
- \_\_\_\_\_ upper left hand corner
- \_\_\_\_\_ center top
- \_\_\_\_\_ center middle