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A Self-Instructional Program For the Technical Services of the Utah State University Library

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A SELF-INSTRUCTIONAL PROGRAM FOR THE TECHNICAL SERVICES
OF THE UTAH STATE UNIVERSITY LIBRARY

by

Heber Clark Barzee

A report submitted in partial fulfillment
of the requirements for the degree

of

MASTER OF EDUCATION

in

Instructional Media and Library Science

Plan B

UTAH STATE UNIVERSITY
Logan, Utah

1969

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I wish to express sincere appreciation to those who have contributed to the completion of this project. First my thanks go to Professor Reed Painter, with whom the inception of this project began, who has served as a member of my Graduate Committee and freely given of his time in council; Professor Kent Wood who has served as Major Professor and for his timely suggestions and recommendations during many hours of consultation; and Dr. Don Smellie, a committee member, who critically reviewed the program in the pilot study and offered many constructive comments particularly concerning the physical aspects of the carrel.

Finally to my wife, Jessie, I am appreciative for her innumerable typings and support throughout this project.

Heber Barzee

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INTRODUCTION

Origin and nature of the problem

Self-instructional carrels and accompanying programs are being utilized successfully in numerous areas of education. In the field of Library Science the potential is especially great because of the skills and knowledge that can be conveyed in an individualized learning situation. To date in the USU Library, this concept has not been applied. Distinct possibilities exist in the various areas of the Library. The Technical Services of the Library or that area where materials are ordered, received, and prepared for the patron's use, lends itself particularly to self-instruction. The work accomplished in Technical Services is not understood by students, patrons, nor many of the personnel working in the Library. A need for instruction and orientation is seen by the administration of the Library and a self-instructional program may correct this problem.

Objective

Create the message content and a self-instructional carrel to teach the workings, processes, and procedures of the Technical Services of the USU Library.

Behaviorial objectives

1. Subjects will gain an overview of the Technical Services

of the USU Library evidenced by writing a paragraph summarizing its function.

2. Assist the subject in understanding three different ways Utah State University may derive catalog cards.
 - a. Manually
 - b. National Union Catalog
 - c. Purchase LC Cards

This will be exhibited by listing the three methods and briefly describing each.

3. Acquaint the subject with standard cataloging tools as demonstrated by:
 - a. Find the entry in National Union Catalog.
 - b. Derive a subject heading from the Library of Congress List of Subject Headings.
 - c. Determine the Dewey Classification number of a book from the Dewey Classification Tables.
 - d. Ascertain the Cutter number from the Cutter Tables.
4. The subject will better understand the information found on a typical catalog card evidenced by his ability to successfully identify major aspects and write their names beside the information on a sample catalog card. The areas of the card to be identified are: author, title, imprint, collation, tracings, notes, call number, and series note.
5. The subject will understand the difference and value of shelf list, main card catalog, and divisional

listings of materials as demonstrated by answering correctly a short true and false quiz.

REVIEW OF LITERATURE

Introduction

The intent of this writer in this review of literature was to gather materials on self-instructional carrels related to teaching staff members of the function of the technical services of existing libraries. Evidently this study conducted in the USU Library was a pioneering effort in the field of Library Science. Nowhere in the available literature is a reference made to the training of staff members by a self-instructional method. The search was concentrated in Library Literature, The Educational Index, Library Abstracts, Education Abstracts, and ERIC. Many notable articles are recorded dealing with self-instruction as related to education in general. Inconsistent terminology greatly complicated the research because writers have freely interchanged the titles of the various teaching approaches. The search was conducted in the areas of Carrels, Instruction, Technical Services, Programed Learning, Personnel, and many other seemingly related areas.

Terminology defined

Self-instruction. Self-instruction is any means by which students can individually learn or gather information by the use of print and non print materials or audio visual media. The term self-instructional is synonymous with

auto-tutorial and auto-instructional, auto meaning self. These three titles are used interchangeably in the literature.

Audio-tutorial. This term has gained considerable popularity through the efforts of Dr. S. N. Postlethwait of Purdue University. Through the medium of tape recordings, learning experiences are integrated into logical and systematic programs of instruction. Occasionally other mediums are utilized such as 16 mm films and 35 mm slides (Postlethwait, 1969).

Teaching machines. Teaching machines generally refer to question and answer devices which the learner controls or operates himself. However, teaching machines often utilize different media such as slides, charts, pictures, and textual material on a screen (McCoy, 1962). Teaching machines range from small plastic boxes (manufactured by Grolier) to sophisticated electronic computer instruction systems.

Programed learning--programed instruction. Programed learning is an all encompassing title for any or all of the previously mentioned teaching devices or methods. The term denotes planned, orderly, sequential steps a student follows to achieve a desired result which is usually previously outlined in behavioral or operational objectives.

Positive distinction between the terms and titles is virtually impossible. Overlapping of different approaches and terminology combined with the various forms of media

is found in library literature. In essence each is an attempt to individualize learning. Most methods exist as a combination of learning experiences.

Self-instructional carrel utilization

Many modified forms of self-instruction began appearing in the late 1950's. The concept has gained tremendous momentum as evidenced by the increased literature available in current periodicals. One could rightfully guess that for most areas of the curriculum, individualized programs have or are being developed. For fifteen sources of programmed instruction, see "Teaching Machines and the Library" (Lewis, 1962).

Teaching library skills

"Research completed to date has shown that automated carrels are especially useful in teaching factual information and skills. Library Science has its full share of these elements..." (Wendt, 1967, p. 207).

One typical example of teaching library skills is "Automation in Freshman Library Instruction" reported by McCoy (1962) at Southern Illinois University. The program is a combination slide, practical exercises using books, indexes, etc., and a multiple choice testing device. McCoy's teaching machine performed a "tutorial job without the expense of the human factor" (McCoy, 1962, p. 470).

Another approach employing sophisticated machinery (Videosonics, produced by Hughes Air Craft) was programmed to teach general information on the library and to give

instruction in the use of periodical indexes and card catalogs. Controlled study indicated that students who utilized the machine used the library more efficiently and sought services from staff members less frequently than students who did not utilize them (Genung, 1967).

Teaching the operation of audio visual equipment

"Syracuse University has self-instruction laboratories equipped with illustrated manual, tape recorder, a phonograph, a 2 by 2-inch slide projector with filmstrip adaptor, a 16 mm motion picture projector, and the necessary pre-recorded tapes, practice films, and instructional tapes" (Rothenberg, 1967, p. 481).

Positive results indicated that transference of learning to other machines as well as keen interest and self confidence in the utilization of audio visual equipment was achieved (Rothenberg, 1967).

Another example concerning the teaching of audio visual equipment and simple graphics is termed an "Auto-Instructional Laboratory" housed at Wisconsin State University. The carrel, containing an 8 mm single concept motion projector, and an Eastman Kodak 2 by 2-inch slide projector, illustrates the process to be learned and performed in the "learn by doing" situation. The Auto-Instructional Laboratory is termed successful by the faculty and students using the program (Schlieve, 1967).

Dr. Robert Diamond in his article, "Programmed Instruction in Audio Visual Equipment Operation and Application,"

concluded his report by listing significant points relevant to this area.

1. Audio-Visual equipment operation and application for both faculty and students can be effectively programmed.
2. An informal approach within the program appears to heighten student interest and reduce problems resulting from previous bias.
3. A short self-contained programmed sequence for each machine permits increased utilization and flexibility of scheduling.
4. Classroom application of the equipment can be effectively demonstrated by utilizing sample materials within the programmed sequence. (Diamond, 1965, p. 6)

Numerous citations are available to testify to the efficient teaching of equipment utilization on a self-instructional basis. For further reference see Curl (1967, p. 480), Macklin (1967, p. 484-487), and Hess (1969, p. 70-71).

Self-instruction automation

Self-instruction programs and carrels can be extended to every phase of the curriculum in our schools. Self-instruction can take the form of 2 by 2-inch slides, 8mm projectors, etc., or it can be a complex machine directed and controlled by a computer.

To typify the extreme of automation and technology and its potential, one more example will be cited. Although this example is not directly related to Instructional Media and Library Science, it portrays what can be accomplished with technology in self-instruction. Termed the "Edison

Responsive Environment Machine," E.R.E. has enabled twenty kindergarten children to achieve second grade reading proficiency over a period of five months. The machine is a

computerized typewriter that reproduces several of the sensory responses of a human being. That is, it talks, it listens, it accepts, it responds, it presents pictorial or graphic materials, it comments or explains, it presents information, and it responds to being touched. (Martin, 1965, p. 9)

Several of the conclusions listed from the experiment were:

1. The E.R.E. Instrument taught within five months (actual time at instrument ranged from 22 hours to 36 hours) twenty kindergarten and mentally retarded young children to read significantly better than twenty children carefully matched by a series of criteria who were taught by enriched traditional reading methods.
2. The children with less intelligence scored as significantly superior as did the brighter children. (Martin, 1965, p. 10)

John E. Tirrell predicts a day when technology will develop to the extent that most learning will occur in the home, office, factory, and shopping center. Instruction will be largely self-instructional. Tirrell foresees the teacher "...as a producer of materials to meet individual learner needs, a prescriber of materials for learner characteristics and interests, and a tutor to facilitate the achievement of obscure points." (Tirrell, 1968, p. 30)

Advantages

Self-instruction is vital aspect of many of America's educational programs. A few of its advantages, some of which have been cited by Curl (1967), are:

1. Self-instruction can be a time saver for the

teacher, releasing her to help individual students.

2. Self-instruction in many instances is a faster and more efficient means to convey information.

3. Students can proceed at their own pace and interest by controlling the speed through the lessons.

4. Self-instruction denotes planned, programmed teaching experiences, whereas traditional methods tend to foster poorly planned, incidental teaching.

5. Cost, in many instances, is less than traditional approaches depending on the equipment and programs purchased.

Rationale for self-instruction

In the late 1950's, America was shocked by the stunning blow of a Russian Sputnik. Confronted with the realization that inferior educational systems might be to blame, educators and commercial enterprises set out to alleviate the problem. At this point education was plagued by the "Black Coffee Syndrome." Dr. Gabriel Ofiesh, Professor of Educational Technology at Catholic University explains this phenomenon.

Our students go to the cafeteria and--by using nothing but machines--can get (1) black coffee; (2) coffee with cream; (3) coffee with heavy sugar; (4) coffee with cream and sugar; (5) coffee with heavy cream; (6) coffee with heavy sugar; (sic) (7-12) tea with all the options; (13) hot chocolate; (14) soup, etc... Yet, when they go down the hall to the classroom, the different abilities, preparations, and experiences are disregarded and unacknowledged. In effect, WE GIVE THEM ALL BLACK COFFEE. (Tirrell, 1968, p. 31)

Other problems are the time factor and increasing enrollments. The public demands a better trained pupil

in less time. With the rate of knowledge explosion beyond the finite reasoning of man, the problems multiply in complexity and urgency.

Self-instruction is seen as a means to an end. That is, it is used to improve the learning experiences for students. Since the broad awakening of the late 1950's, much has been accomplished and education as a whole has improved greatly.

Conclusion

Self-instruction is only a minute aspect of the educational revolution in America. Ungraded classes, team teaching, dial access and computer assisted instruction, to mention a few, denote drastic changes over grandmother's day. As educators we have no other recourse but to innovate with programs that can do the job faster, with greater efficiency, and at less cost. Self-instruction should be a prime consideration of any educational program.

PROCEDURES AND HISTORY OF PROJECT

Origin of project

Winter quarter, 1969, this writer enrolled in Library Practice 135. In this course, the instructor mentioned a personnel problem confronting the Technical Services, namely the training of the staff. The USU Library hires students and student wives in many of the clerical positions available in Technical Services. Notoriously known for a high rate of mobility, student help contributes to a scene of continual change as staff members come and go.

In the past, no formal training has been given to incoming staff members. Orientation and coaching by other staff members has been freely given as needed by experienced members of the staff. The inadequacy of this training has been evident as each staff member assumed his individual role in the Technical Services.

Suggested was the development of a formal means of visualizing the functions of the Technical Services which would orient new staff members as to their responsibilities and present an overview of the Technical Services for staff members outside the department who do not understand the work accomplished in ordering, receiving, and preparing a book to be placed on the shelf for a patron's use.

Seeing tremendous potential for a Masters project, this writer accepted the responsibility of attempting

to develop a program and carrel. A committee was selected and a proposal written which was later revised and then accepted by committee members.

Concurrently enrolled in Education Administration 265, Computer Application and Systems Design in Education, the writer studied techniques in systems design and their application to problems in Education. As a final project, each student was required to analyze a problem, then use the system approach to show how this problem could be corrected. Chosen for the area of concern was the Technical Services of the USU Library. The problem encompassed the need for formal instruction and orientation in Technical Services for new as well as old members of the staff. The flow chart objectives were developed. The entire three months was occupied in speaking with knowledgeable people about the problem confronting Technical Services and the project. Numerous flow charts were designed, later to be revised, in an attempt to graphically portray the essential facets of Technical Services relevant to the problem.

Problem. A problem encountered was how much detail to include in the flow chart. Consulted often were the instructor and advisors who offered timely suggestions.

By the end of spring quarter, an acceptable system supported by objectives of the carrel was completed. Deemed necessary was the development of behavioral objectives which was facilitated by reading Preparing Behavioral Objectives by Robert Mager. A brief pre-test and post-test was

written which was intended as a guide and a constraint to facilitate the development of the project.

Subject content

Problem. The scope of the program posed a problem. What to include and delete in presenting an overview of Technical Services was not a simple task. This writer originally wrote the subject content following the sequence on the flow chart of Technical Services. It was then revised until it was deemed acceptable by the committee members.

Physical aspects of the carrel

At this point the physical aspects of the carrel began to materialize. A used hardwood table, a one-half inch by 4 foot by 8 foot sheet of plywood, antique glaze, and mirrors from an overhead projector initiated the job. For further description, see physical aspects, page 52.

Integration of subject content with video and audio

A search was conducted for cataloging tools and books to be used in the carrel. Most of the tools were borrowed from the Instructional Media and Library Science department. Books in Print came from the USU Library.

Problem. An attempt to find two typical books which would serve as examples to demonstrate how the different segments of the catalog card are derived was made. Typical books were never found. The search commenced in the Cataloging Department and ended in the main card catalog.

Eventually, two books were chosen from looking at their respective catalog cards. Each had something missing. The book, How to Know the Weeds, did not contain notes but was finally selected as the book to demonstrate the different areas on the catalog card in the program.

With the subject content finally revised to meet the approval of the members concerned, plans for visualization began. Added to the subject content were an introduction and conclusion, phrases to connect pictures (slides) and referents (actual cataloging tools) to the subject content, and a booklet which contained examples of materials employed in ordering, receiving, and circulating library books.

With the dialogue ready for taping, a Honeywell Pentax 35 mm camera was borrowed from the Instructional Media and Library Science Department. Pictures were then taken on the Technical Services and areas of the library related to the project being designed. Additional pictures were shot the next day with a 154 Kodak Instamatic. Also shot, using photo floods and a copy stand, were the library cards used in the program to depict the process of original cataloging.

When the slides were returned from Photo Services of USU, both sets of Technical Services pictures were of good quality. The failures occurred in the close-ups of the individual library cards which were over exposed. With no other alternative, high contrast photography was employed and colored slides combined with black and white high

contrast slides were used on the rear screen of the carrel.

Flow chart

The flow chart developed earlier in the project was redrawn, color coded, mounted, and preserved with Seal-Lamin. Provisions to hang it in the back of the carrel were made.

Tape recording

After several dry runs, the dialogue was taped with a Rheem tape recorder by this writer.

The dialogue, now recorded on tape, the slides in the Kodak 850 Carousel, the reference booklet, the systems chart of Technical Services, and the actual cataloging tools were combined into a unit termed a self-instructional carrel. The entire unit was then dismantled and transported to the Technical Services area. Justification for moving the carrel into Technical Services included:

1. Association of subjects with the actual environment of Technical Services.
2. Accessibility of the Shelf List (positioned in front of the carrel) for individual reference during the program.
3. Accessibility of the National Union Catalog (positioned directly behind the subject) which was referred to in the program.

Pilot study

The carrel was evaluated by two instructors in the

Instructional Media and Library Science department. Their suggestions included:

1. Better synchronization between slides and dialogue.
2. The addition of slides in the carousel.
3. Moving the slide changer and directions to the right side of the carousel.
4. The underlining of specific examples in the cataloging tools with red pencil to facilitate easier reference.
5. Further clarification of parts of the dialogue.
6. Retaping the dialogue.

All of the above recommendations were then employed into the development of the carousel.

Testing

Five days later, twenty subjects had taken the pre-test, experienced the 45-minute presentation, and completed the post-exam. Subjects were previously screened by the following questions:

1. Have you ever worked in the Technical Services of a library?
2. Have you ever completed a cataloging and classification course?

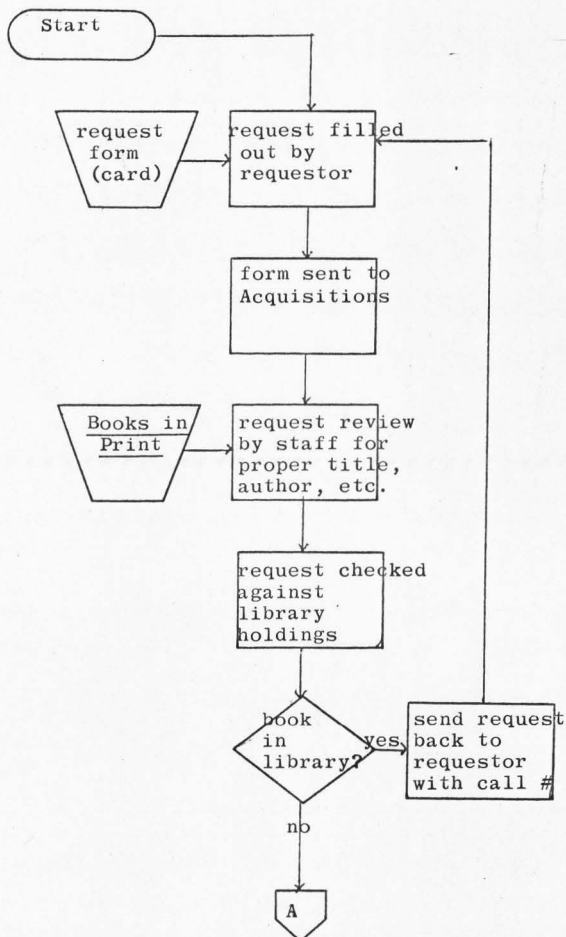
Anyone who did not answer negatively to the above questions was excluded from the project. The results of the tests were tabulated and simple statistics drawn. From these results the writer attempted to determine weaknesses within the program and make recommendations to improve the

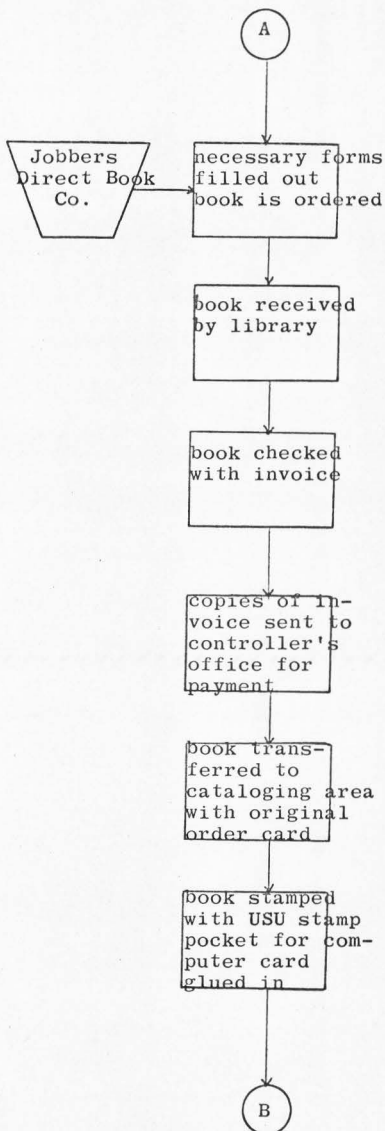
program.

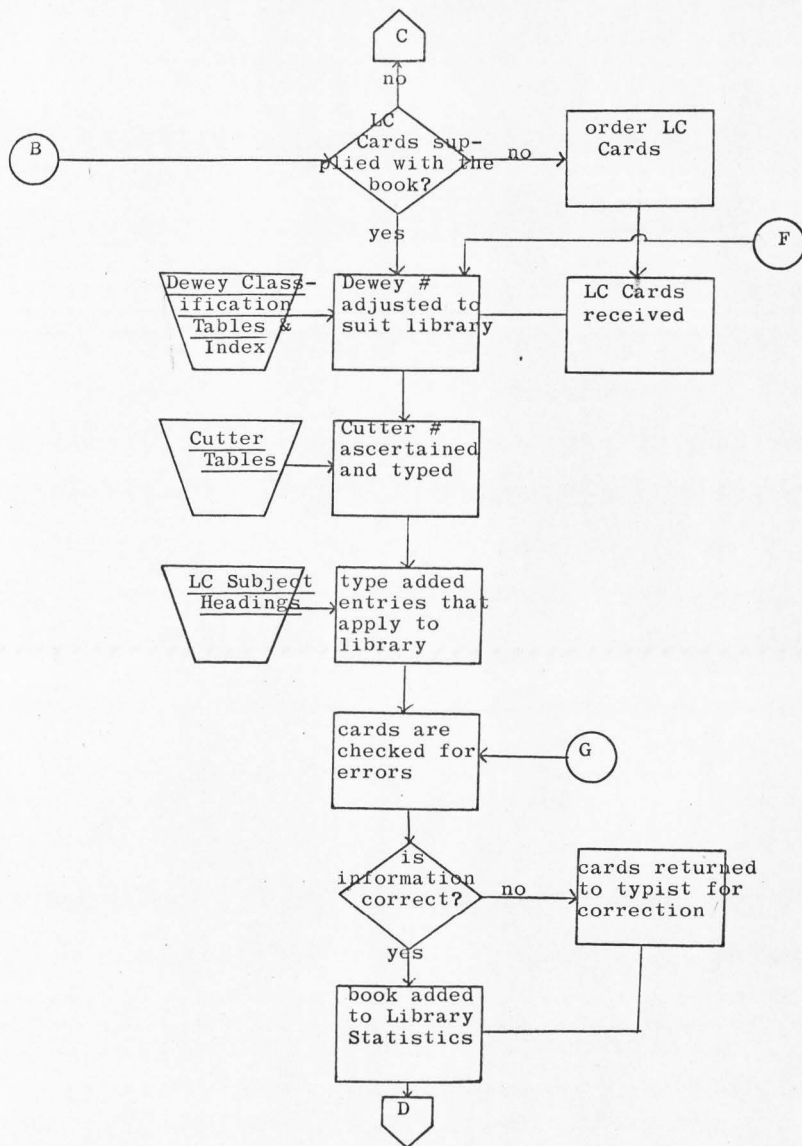
During the time the carrel was available in the Technical Services, many interested individuals, staff members, and students took the opportunity to be instructed by the program. From them came valuable suggestions and recommendations. In addition to these timely suggestions each subject was asked to respond on the post-test to the following: Please list improvements that you feel would add to the effectiveness of this self-instructional carrel. Many weaknesses which would not have been apparent otherwise, were discovered through this technique.

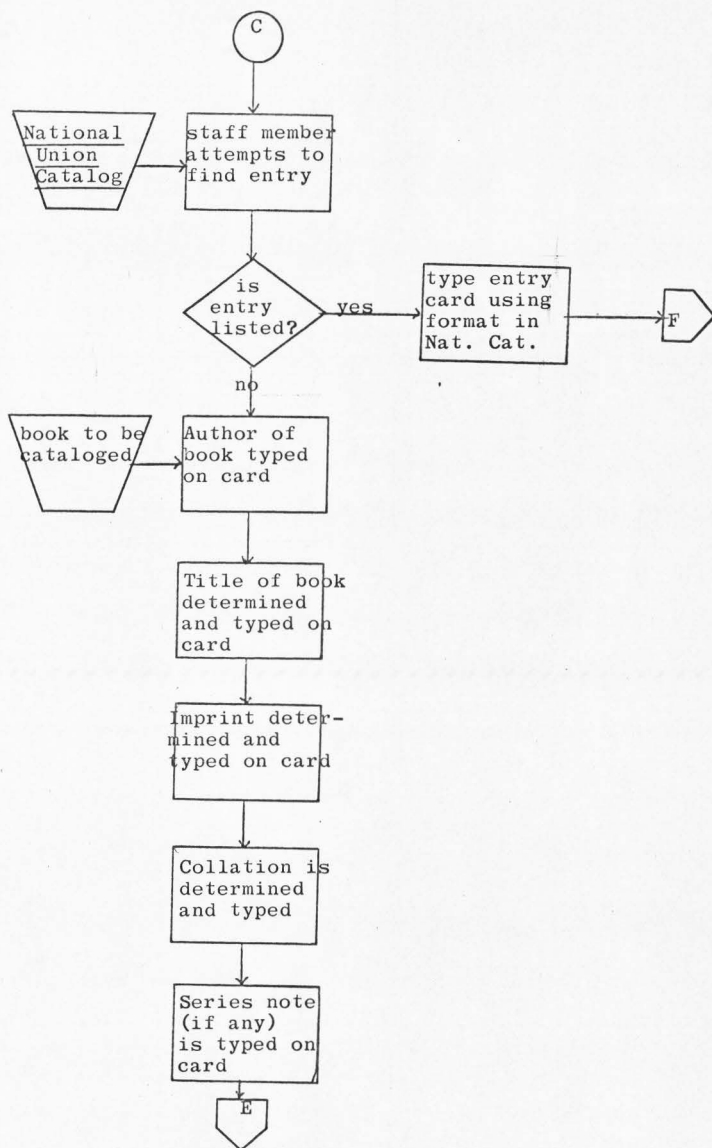
From the recommendations of participants, staff members, and interested individuals combined with test results, conclusions of the success of the carrel were formulated.

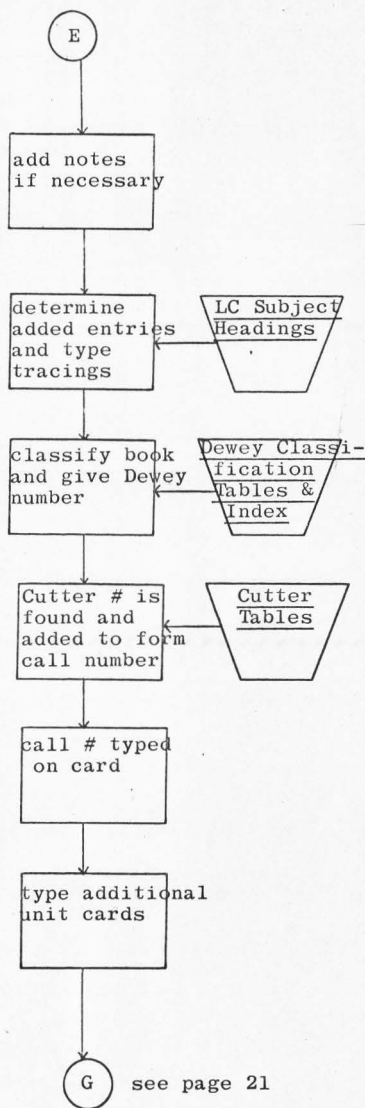
SYSTEM DEPICTING THE PROCESSES AND PROCEDURES OF THE
TECHNICAL SERVICES OF THE USU LIBRARY

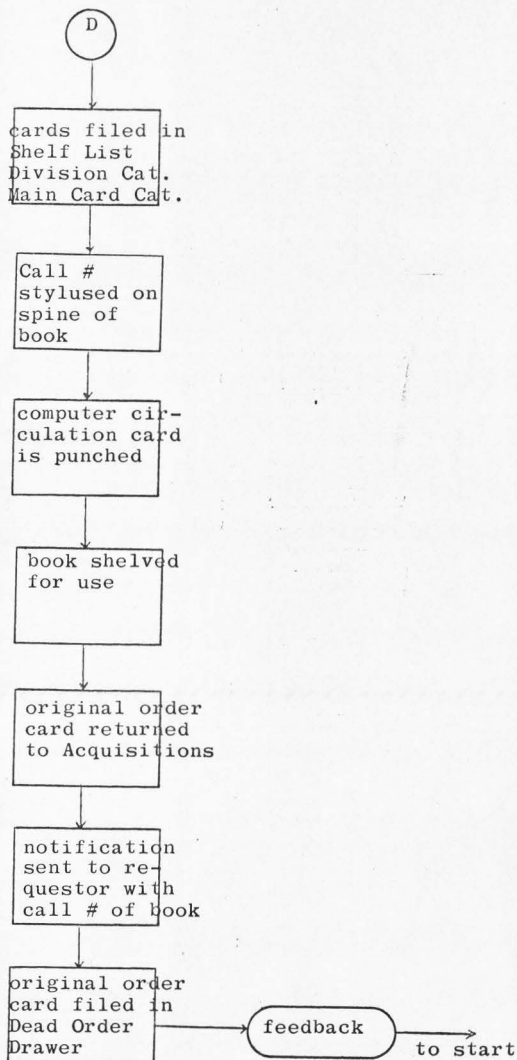












DIALOGUE

Welcome to a self-instructional carrel. The purpose of this carrel is to help you better understand the functions of the Technical Services of the USU Library. The test you just completed will be given again to you as a means of determining the value of this program and to ascertain its worth in future programs in teaching various aspects of the library.

Look around the carrel. On your left and also in front of you are books which you will be using. Note that the books have numbers attached to their spines and covers. We will refer to each book by its number as the time and occasion arises.

Directly in front of you, on the back of the carrel wall, is a system. This system is a visual means of depicting the function and processes of the Technical Services. Note the different colors denoting separate areas to which we will later make reference.

On the table and to your right is a reference booklet containing examples of different materials used in ordering, receiving and cataloging books. These examples will be referred to as Example A, B, C, etc., in the program and you can easily refer to the appropriate example by turning to the specified tab on the right side of each page.

This program is combination tape and slide presentation. Beneath the table on your left is a 35 mm slide projector. Note that the control has four positions: off, fan, low, and high. At this time would you please switch the control to low. You should have a picture on the screen to your left. You can change the picture by merely pressing the forward button on the little black box (slide changer) near the right wall of the carrel. Each time you hear the ring of a bell, press the forward button. If at any time you wish to repeat a picture, just press this button. Remember, however, unless you stop the tape it will continue playing.

Please be mindful that you are in complete control of this carrel. If at any time you desire to stop, pull down the green knob on the tape deck and the tape will stop. You can rewind the tape by merely moving the green knob to rewind position. Please feel free to back up and rewind the tape any time you feel you have missed some aspect of this presentation.

You are sitting in the cataloging area of the Technical Services of the USU Library. The Technical Services consists of three main areas: Serials, Acquisitions, and Cataloging. We are going to follow step by step the process and procedures of ordering, cataloging and eventually placing a book on the shelf for the patron's use.

We are now ready to proceed. Initially, someone decides that a particular book is needed in the library. He

requests that book by filling out a card called the "original order card." Refer to the reference booklet, example A. On this card the requestor, which may be a professor, supplies the appropriate information in the designated spaces. Spaces are provided for the author, title, date, edition, publisher, address of publisher, and the person requesting the book. The space for the call number and order number on the left hand side of the card will be filled in later by the library staff.

After the card is filled out, it is sent to the acquisitions department of the Technical Services of the library. (bell I) Press the forward button on the black box. On slide one you see the acquisitions department which is that area of the Technical Services that orders and receives new materials for the library.



Figure 1. Acquisitions department

In acquisitions the request form is reviewed and the information on the card is verified. The title, author, and other necessary bibliographic information must be

correct. Books in Print and other library reference books are used to ascertain the correct information. Take book I from the shelf. Look through its contents. Note that books are listed by the author and later in the text by title. Each entry contains all the information necessary to order a book. This book is one of several tools widely used by librarians and is considered of utmost value to verify author and title. Return book I to the shelf.

The request is then checked against the library holdings (the books in the library) to make sure that the book will not be duplicated. (bell 2)



Figure 2. Main card catalog

First a staff member goes to the main card catalog on the first floor and looks for the book by author or title. Someone else may have ordered the book and this checking will avoid needless duplication. If the staff member finds that the book is in the library, or that the book is being ordered or presently being processed in the library, he merely writes the call number of the book on the original

order card and sends it back to the requestor. Remember on example card A, that a space is provided on the card for the call number of the book.

If the book is not in the library, an order is typed by a staff member on an order form. See reference booklet, card B. The extra carbon copies are for different uses by the staff. We will refer to the last carbon later.

The order form is then sent to a book jobber. A book jobber is a company that handles bulk printed materials, making it possible for a buyer to send one large order instead of small separate orders to individual companies. Stacy, and Baker and Taylor are two jobbers that supply USU with many of its books. If the book jobber is unable to supply a particular book, the library must send direct to the publisher or some smaller book company.

The book is received from the jobber. With each shipment is an invoice. See reference booklet, card C. An invoice is a list of all the books sent. A staff member carefully checks the invoice to make certain that the books ordered have been received, or will be shipped later. Copies of the invoice are sent to the Comptroller's Office of USU, and it is he who sends payment to the book jobber for the books received.

(bell 3) The book is then transferred to the cataloging area as shown in the slide. The original order card, example card A, is paper clipped on the inside cover.



Figure 3. Cataloging area

(bell 4) The book is stamped to identify the book as property of USU, and a corner pocket is then pasted on the inside cover. This pocket will later contain the computer card used in checking out the book at the circulation desk.



Figure 4. Corner pocket and USU stamp

Refer to the systems chart in front of you. Observe the pink section to review what has been accomplished thus far. The request form, example card A, is filled out by the requestor. It is then sent to the acquisitions depart-

ment of the Technical Services where the title, author, and other information is checked for accuracy using Books in Print, book I in our carrel. The request is then checked against the holdings of the library and also with the books on order. (bell 4A) This slide shows the original order drawer which is a record of all the books being ordered.



Figure 4a. Original order drawer

If the book is not currently in the library collection or being ordered, an order form is filled out. The order form is sent to a book jobber. When the shipment is received, the invoice is checked to be sure all the books ordered are accounted for. A copy of the invoice is sent to the Comptroller's Office for payment to the jobber. The book is then sent to the cataloging area where it is stamped and a pocket is glued to the inside cover to hold a computer card.

After the pocket for the computer circulation card has been glued to the inside cover, a decision is made

whether or not to order catalog cards. Many book companies supply catalog cards with the books ordered. Turn now to the booklet, page D, for an example of cards sent with books. If catalog cards are not supplied with the book, several alternatives exist. One is to order them from the Library of Congress. This is easily done because most books printed in America contain the Library of Congress order number, more commonly referred to as the LC order number. This number is usually found on the back of the title page in most books. Refer now to reference booklet, page E. The library has only to specify this LC order number to order a set of cards.

Another commonly used method to obtain cataloging information is to refer to the National Union Catalog. This multivolume work is directly behind you. In it, in most cases, the books are entered alphabetically by author. You begin by searching in the volume listing the year the book was published. Book 3, volume 23, in our carrel is just one volume of the National Union Catalog. Remove this volume, book 3, from the shelf. Also remove book 2, How to Know the Weeds, from the shelf. Notice the author of book 2 is Jaques, H. E. This entry is on page 192 of this volume of the National Union Catalog, book 3, and is entered under Jaques' full name, Henry Edwin. Refer to the tab. A staff member would simply copy this information on to a blank catalog card. Briefly thumb through this volume of the National Union Catalog noting particularly how entries

are listed, by the last name of the author. Please replace book 3, the volume of the National Union Catalog, to the shelf.

Let us suppose, however, that the cataloging information for our book 2 is not contained in the National Union Catalog and cards are not available from the Library of Congress. Then the cataloger or staff member would have to catalog the book himself obtaining the needed information directly from the book. Let's follow this process of original cataloging step by step using book 2.

Author. (bell 5) On a blank catalog card the cataloger types the name of the author.

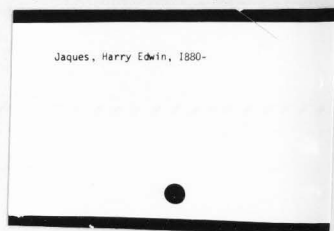


Figure 5. Author

Refer to the tabbed title page in book 2. The title page usually serves as the basis for the information to be placed on the catalog card concerning the author.

The typical book has an author. Note that the author of this book is H. E. Jaques. It is typed on the book card, last name first followed by the given name.

Title. (bell 6) Following the author, on the next line, is the title of the work as shown in slide 6. The title of our book is How to Know the Weeds. The subtitle also included here is Pictured-Keys for identifying the more common weeds of farm and garden, with interesting facts concerning them.

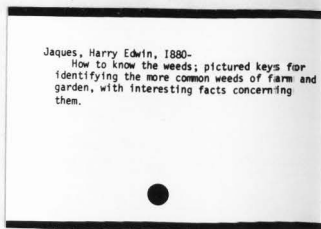


Figure 6. Title

Imprint. (bell 7) Following the title is the imprint.

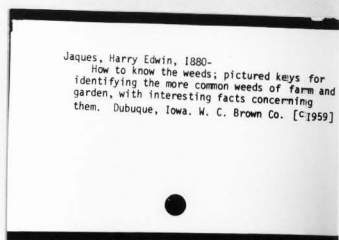


Figure 7. Imprint

The imprint is the information that includes the publisher, place of publication, and date of publication, and

is usually found on the title page. In this case, the date of publication is found on the back of the title page. The imprint may serve two purposes: 1. Provide identification for the book. 2. Indicate where it may be purchased. Our book was published by the William C. Brown Company in Dubuque, Iowa, in the year 1959. The imprint is typed after the title is shown. You can easily remember imprint because it tells where the book was printed, the date, and the name of the publisher.

Collation. (bell 8) Next comes the collation which is the cataloger's physical description of the book.

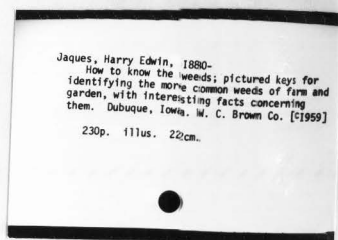


Figure 8. Collation

It consists, basically, of abbreviations for the number of pages, illustrations, and the height of the book in centimeters. Note the total pages of our book is 230. It contains illustrations, and the size is 22 centimeters. A simple means to remember the collation is to recall that the word collate means "to bring together." In our collation we brought together 230 pages and illustrations

in a book 22 centimeters high.

Series note. (bell 9) Books often belong to a series and it is important to include this information on the card.

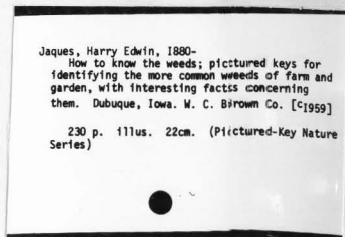


Figure 9. Series note

A series is a number of related volumes. The name of the series is enclosed in parentheses directly following the collation. Our book is one volume of the Pictured-Key Nature Series, as indicated on the title page. Note on the back of the title page the other books included in this series.

Notes. (bell 10) Notes may be added as seen necessary by the cataloger.

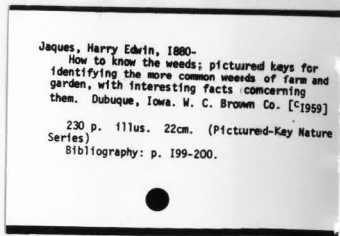


Figure 10.. Notes

The notes serve to supply additional information. Bibliographical information and other explanatory material are often included here. Bibliographies are common notes. Our book does not contain a bibliography. However, if it did, it would appear below the collation, as indicated on slide 10.

Tracings and subject headings. (bell 11) The tracing is the record on the bottom of the card which shows all the additional areas under which the librarian has entered cards in the card catalog for a specific book.

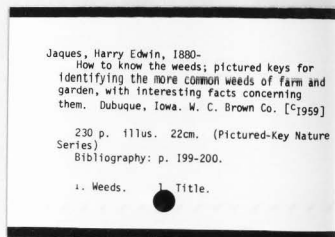


Figure 11. Tracings and subject headings

The term tracing is easily remembered by noting that by the tracing you can trace all the cards representing a particular book. The first segment of the tracings contains subject headings listed with Arabic numerals. The subject heading is a word or group of words indicating the subject under which all books or materials dealing with the same theme or subject are listed in the card catalog. Subject headings are for the most part pre-determined by

the Library of Congress and are not randomly assigned by the person preparing the catalog card. The recommended subject headings are found in the compilation known as the Library of Congress List of Subject Headings. Take book 4 from the shelf. With this guide, the subject headings are standardized. Likely you could find the same book in New York listed under the same subject as in a library in Logan. The book we are cataloging, book 2, How to Know Weeds, is about weeds. Look under weeds in the Library of Congress List of Subject Headings. Note the tab, page 1399. For our purposes today, the only subheadings that we will use are those listed in bold black type. Therefore, the subject heading which we will type on the card is Weeds. Note the subject weeds is recorded on the catalog card preceded by an Arabic numeral 1.

Often included in the tracings are joint authors, editors, and the title by which our book could be found. On our card, we have title preceded by the Roman Numeral I. These tracings, or added entries as they are called, tell the exact cards the cataloger has made for the book. Should a book be withdrawn, the librarian has a record of the cards he must also withdraw. Another purpose is to inform the patron of other possible subject areas in which he may look for related information. Return book 4, the Library of Congress List of Subject Headings, to the shelf.

We now have all the information you need to catalog the book.

Classification. (bell 12) We are now ready to classify; that is, assign a number to each book by which it could be found in the library collection.

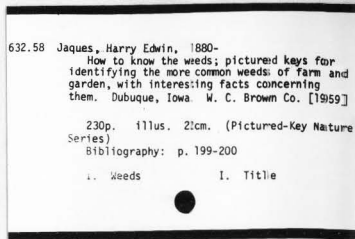


Figure 12. Classification number

The USU Library uses the Dewey Decimal Classification system. This system is said to be used by 95% of all the libraries in the nation. Its purpose is to give the patron an address by which he can find the book on the shelves. Also, it groups related materials together. The system has ten major divisions beginning with 000 and ending with 900. Refer to book 5 which is the Dewey Decimal Classification Tables. Note these ten divisions, yellow tab, page 109. Each of these ten divisions represents some major discipline. Note for example, 400 represents languages. Each of the ten divisions is then broken down into ten subdivisions. Turn the page to 110. Note that Greek is 480. Each subdivision is further broken down or subdivided until most subjects thought of by man can be represented by a number. Briefly look through the book and

notice the detail and extent many numbers are subdivided. Many numbers extend to seven and eight digits. It is the cataloger's responsibility to find the number which most nearly represents the subject of every book.

If you were cataloging, how would you find a Dewey number? Along with the Dewey tables is included an index. Refer now to this index, book 6. First we look at the book to be classified very carefully and decide what subject it is about. Our book 2 is about weeds. Now look under weeds in the Dewey Classification Index. Note the pink tab, page 2458. The area most closely relating to our book is weeds agricultural pests, and suggested number is 632.58. Refer now to the blue tab, page 812, in the Dewey Classification Tables for this number. Plants, injuries, disease, pests and their control is 632. Moving down the page, we see that 632.1 represents "from the elements," 632.3 "Bacterial diseases," 632.5 "Plants," and 632.58 "Weeds." The number we will use is 632.58. Replace books 5 and 6, the Dewey Tables and Index, to the shelves. As review remember the Index refers a cataloger to the Tables. Catalogers do not rely on the Index for classification. The Index is merely a tool to guide you to more specific numbers in the Dewey Classification Tables. The Dewey number is typed on the left side of the catalog card as seen on slide 12.

Cutter numbers. (bell 13) Below the Dewey number on the spine of our book 2 is the letter J followed by the number 36.

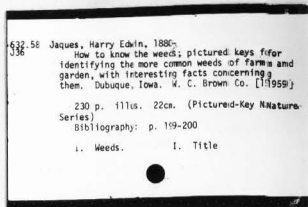
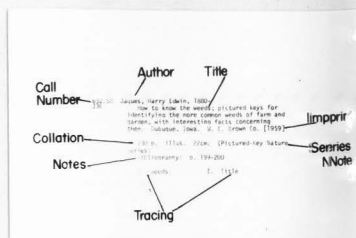


Figure 13. Cutter number

This is the Cutter number. There are possibly many books on the same subject with exactly the same classification number. We need to distinguish the book further, and we do it with a Cutter number. To further classify our book, we assign a letter and a number to the author's last name and then type it directly below the Dewey Classification number. These Cutter numbers are found by referring to the Cutter Author Table. Take book 7 from the shelf. Beside each alphabetical entry is found a number. The cataloger looks down the list of alphabetical symbols until he finds the entry that most closely represents the last name of the author. Let's find the entry for our book. Since the author's name is Jaques, look under the J's. Observe that the closest entry to Jaques is J A Q. Therefore the Cutter number will be J36. The cataloger writes the first letter of the author's last name and the number below the Dewey number, as depicted in slide 13. The Dewey Classification number combined with the Cutter

number is called the Call Number. Variations exist in Cutter numbers which will not be discussed in this presentation. Replace book 7.

Let's review at this point. Refer to the systems chart. Recall the three sources from which to obtain cataloging information if the cards were not sent with the book: 1. Order the cards from the Library of Congress, shown in the green area. 2. Refer to the National Union Catalog to obtain the information needed. Observe the black area. 3. Catalog the book ourselves, orange area. This involves finding for the book the (bell 14) author, title, imprint, collation, series note, notes, tracing, and call number.



a letter and number from the Cutter Tables, book 7, representing the author's last name. The Dewey Classification number and Cutter number are then typed on the card and are referred to as the Call Number.

If you feel that you are in need of a break, hang up the head phones, turn off the tape recorder, and turn the projector to the fan position.

Now that we have the catalog card complete with imprint, subject heading, and call number we must prepare other cards to be placed in the card catalog. Recall we mentioned that a patron could find the same book by either looking under the author's name, the subject, or the title of the work. Each entry requires a separate card. The USU Library uses what is termed the unit card for this purpose. One basic format is used for the author, subject, and title cards. The author card is already typed and only needs to be filed alphabetically by the last name of the author in the card catalog. See example F in the reference booklet, card 1.

Directly on the first line of another card is typed the subject in red. Notice card 2. This card is placed in the card catalog along with the other cards representing a particular subject. The title of the book is typed on the top of another card in black. Notice card 3. Then it is placed alphabetically in the card catalog.

(bell 15) Before the cards are filed, they are checked for errors. In slide 15, you see Dixie Drage

carefully looking over typed unit cards.



Figure 15. Checking cards

If the cards are found complete in format, information, and call number, the book becomes part of the library statistics. (bell 16) Here you see a staff member holding a rather large booklet which contains the monthly book totals. This running total is kept up to date on the number of books contained in the library as well as on those books in each major division.



Figure 16. Library statistics

Following this procedure the cards are placed in the appropriate card catalogs.

Main card catalog. (bell 17) On the first floor near the north east corner is a card catalog as you see on slide 17.



Figure 17. Main card catalog

It is termed the main card catalog because it contains a record of all the materials and books which can be found by referring to the Dewey system in the USU Library. You will find books listed by author, title, and subject. Cards for each book are placed in the main card file alphabetically by their author, title, and subject.

Shelf list. On the first floor in the cataloging area out of sight of the patron, is the shelf list. The shelf list is also a record of all the books in the library but the cards are arranged and filed as the books are arranged on the shelves. That is, all the cards are filed by their call number. You could begin in the 000 numbers and proceed through the shelf list to the 900 numbers.

The shelf list is of use to the staff for several reasons. It is an accurate record of the entire holdings of the library and it is a record of the number of books in a particular area or subject. The card file you see on the other side of the post in front of you is the shelf list. Feel free to stop the tape, take off the ear phones, and briefly look at the shelf list. Pull out a drawer and note how the cards are arranged. You may now stop the tape by pulling back on the green knob.

Division catalogs. In addition to the main catalog on the first floor, you will find separate card catalogs for each floor of the library. We term these card catalogs the Division catalogs because each floor of the USU Library is known as a division. (bell 18) The second floor is the Science Division, (bell 19) third floor the Social Sciences, (bell 20) and fourth, the Humanities.

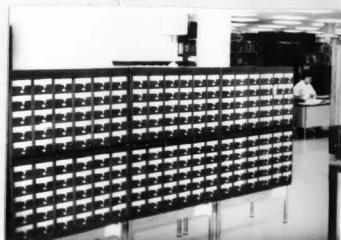


Figure 18. Science division catalog



Figure 19. Social science division catalog



Figure 20. Humanities division catalog

If a book is located on the third floor of the library, the division catalog would have an author, title, and subject card there for the patron's reference. An author, title, and subject card would also be included in the main card catalog on the first floor.

Call number stylused. (bell 21) The call number must be permanently placed on the spine of the book.



Figure 21. Stylusing

This process is known as stylusing and is done by typing the call number on a special adhesive material. Then the adhesive material is ironed on the spine of the book for permanent identification, as shown in slide 21.

Computer circulation card. (bell 22) Utah State University employs the use of the computer in checking out books.



Figure 22. Card punch machine

Cards are punched by a card punch machine. A sample computer card is contained in the reference booklet, tab G.

The computer card is placed in the card pocket in the front of the book. The title and author of the book is represented on the card by the holes. (bell 23) When the book is checked out, the card is read by a card reader. Then the information is fed into a computer for further reference.



Figure 23. Circulation desk

(bell 24) The book and computer circulation card are shelved in the stacks prior to checkout.



Figure 24. Book shelved

The original order card, booklet example A, which has been with the book during the entire cataloging process is now sent back to the acquisitions area in the Technical Services. A sample notification card is found on page H in the reference booklet. This card is then sent to the original requestor with the call number indicating that the book is available for his use. (bell 25) The original order card, example card A, is then filed in a dead order drawer.



Figure 25. Dead order drawer

This concludes the overview of the Technical Services of the USU Library. Your participation is appreciated and we sincerely hope you have benefited from this experience.

For evaluation purposes of this program, not for evaluation of you as an individual, please take the short exam again. Note that the post exam has one additional question. What would you recommend to improve this self-instructional carrel? Respond freely and frankly to this question. (bell 26)

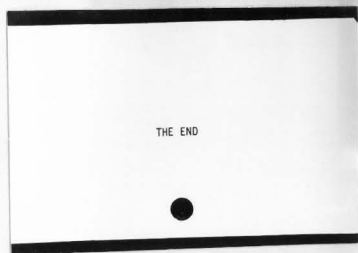


Figure 26. The end

Please turn the slide projector to the fan position for cooling. Return the head phones to the hook, and turn the blue knob on the tape deck to the off position. Thank you very much.

PHYSICAL ASPECTS OF CARREL

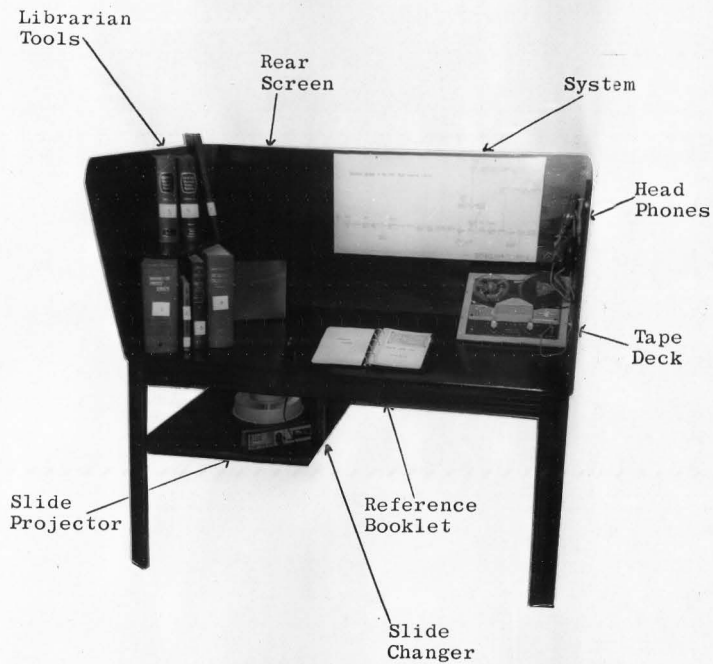


Figure 27. Physical aspects of carrel.

Dimensions

Wooden table: height 30 inches, length 64 inches
depth 31 inches.

Sides: one half inch plywood, 24 inches in height.

Shelf for slide projector: one half inch plywood,
24 inches by 31 inches.

Finish

Antique tudor glaze paint.

Equipment

Slide projector: 35 mm Eastman Kodak Carousel 850
with automatic focus and zoom lenses.

Tape deck: (play only) Audiotronic Model 110P,
manufactured by Audiotronic Corporation, North Hollywood,
California.

Head phones: Audiotronic, manufactured by Audiotronic
Corporation, North Hollywood, California.

Projection System

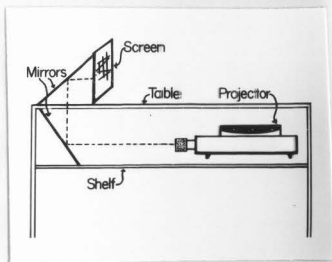


Figure 28. Projection system

The mirrors used were property of the Instructional Media and Library Science Department and were taken from a discarded US Army surplus overhead projector. Minor revisions were made but generally speaking they converted very easily into the carrel. The screen used was the "head" of the overhead projector which contained a 9-inch by 10-inch sheet of window glass and metal frame. One sheet of 9-inch by 10-inch matte acetate positioned directly behind the glass served to stop the image projected by the 850 Carousel, creating a suitable rear screen.

Limitations

The rear screen would not project high contrast negative slides. A minor problem occurred in an attempt to produce and utilize the negatives from the catalog cards to depict cataloging procedures. Four images were cast on the screen. When positive film was developed and framed into 2 inch by 2-inch slides, the problem was eliminated.

The rear screen and mirror arrangement would not accommodate 8 mm projection. The two mirrors reflected an image up-side-down and backwards. The 8 mm projector can be turned up-side-down but a third mirror will be necessary to reverse the image on the screen.

Recommendation. The 8 mm projector is small and the carrel is plenty large enough to accommodate a small screen on the back wall if future programming warranted the utilization of the 8 mm medium.

Overall performance

The tape deck was mounted at a 45 degree angle, facilitating ease of operation.

The performance of the rear screen Carousel projector and tape deck surpassed all expectations. The overall construction, design, and size of the carrel were adequate.

Cost estimate of physical aspects of carrelCarrel, general construction.

Cost	Item
\$ 5.00	Used table
\$ 8.50	One-half inch plywood, good on both sides
\$ 5.00	Miscellaneous--screws, metal plates, etc.
\$ 4.00	Paint, Bennets antique tudor
<u>\$22.50</u>	Total

Equipment.

Cost	Item
\$126.00	Kodak 850 Carousel projector
\$ 85.00	Audiotronic tape deck and earphones
<u>\$211.00</u>	Total

(The above equipment was borrowed from the Instructional Media and Library Science Department.)

Software.

Cost	Item
\$10.00	Slides, Ektachrome--two rolls of twenty
\$ 3.50	High contrast film
\$ 3.00	Recording tape, 1200 foot reel
<u>\$16.50</u>	Total

Estimated total cost to duplicate carrel and program.

Cost	Item
\$ 22.50	Carrel, general construction
\$211.00	Equipment
\$ 16.50	Software
<u>\$250.00</u>	Total (This total cost does not include the value of the books used in the carrel.)

Books utilized in the carrel

(Numbered as they appeared in the carrel.)

1. Books in Print
2. How to Know the Weeds by Henry Edwin Jaques
3. Library of Congress National Union Catalog,
volume 23, 1959-62
4. Library of Congress Subject Headings
5. Dewey Decimal Classification Tables
6. Dewey Decimal Classification Index
7. Cutter Author Tables

Additional books used in pre and post tests

The Locust by R. Barras

Dewey Decimal Classification Tables

Dewey Decimal Classification Index

Library of Congress Subject Headings

Library of Congress National Union Catalog, volume 4,
1963-67

Cutter Author Tables

System depicting the technical services

The flow chart which hung on the back of the carrel wall measured 15 inches by 30½ inches. Its basic construction consisted of the system processes typed with a carbon ribbon type writer on white 8½ by 11½ inch paper. The paper was then mounted with MT-5 onto 28 ply card board. Glossy Seal-Lamin was later applied as a protective covering and black tape formed a border around the outside.

Instructions

The carrel was designed to be self-instructional. Therefore anyone desiring to experience the program could do so without assistance. Directions taped on the table of the carrel read:

1. Put on the head phones hanging on the right carrel wall.
2. Turn the blue knob to 4 or 5.
3. Push the green knob to start position.
4. Adjust the volume by turning the black knob.

Additional instructions were typed and taped to the slide projector shelf to denote the controls of the 35 mm slide projector.

Finally, instructions were added to the right side of the carrel by the slide changer to clarify forward and reverse. Other instructions were those given audibly by means of the tape recorder.

RESULTS AND CONCLUSIONS

The results gathered from the pre-test, post-test, recommendations from subjects, and casual inspection by interested individuals were most enlightening. The subjects honestly and frankly gave constructive criticisms at the conclusion of the post-test and in conversation after the experience. Several staff members of Technical Services took the occasion to review the carrel and without exception gave favorable comments as well as helpful recommendations for further studies or programs which may be devised for the USU Library. The carrel apparently was a success; however, judged from the data of the pre-test and post-test, success was achieved in some areas but not in others. The software must now be revised to capitalize on the strengths and alleviate the weaknesses.

Behavioral objectives

At the onset of this study, behavioral objectives were created. The results of the self-instructional carrel can only realistically be ascertained as they are compared with the original objectives. By noting the frequency of correctly and incorrectly answered questions on the pre-tests and post-tests, Table 1, the writer has drawn generalizations as to the success of the carrel in accomplishing the behavioral objectives.

Table 1. Frequency of correctly and incorrectly answered questions on the pre- and post-tests

Test Items	Pre-Test Questions Correctly Answered			Post-Test Questions Incorrectly Answered		
	Male	Female	Comb.	Male	Female	Comb.
1.	0	0	0	0	1	1
2a. N.U.Cat.	1	1	2	0	5	5
2b. LC Cards	2	0	2	4	5	9
2c. Manually	0	0	0	4	9	13
3a.	7	6	13	0	1	1
3b.	0	3	3	4	2	6
3c.	3	2	5	1	2	3
3d.	0	1	1	3	3	6
4. Author	9	9	18	0	0	0
Call No.	9	7	16	0	0	0
Collation	0	0	0	0	1	1
Notes	2	0	2	0	2	2
Tracings	0	2	2	2	2	4
Series	1	0	1	1	1	2
Imprint	1	0	1	1	1	2
Title	6	5	11	0	1	1
<u>True and False</u>						
1.	4	2	6	0	1	1
2.	4	1	5	0	0	0
3.	6	2	8	1	2	3
4.	1	1	2	1	3	4
5.	6	4	10	1	2	3
6.	6	1	7	2	3	5
7.	2	1	3	2	3	5

Refer to the pre- and post-tests page 71.

Behavioral objective 1. Subjects will gain an overview of the Technical Services of the USU Library evidenced by writing a paragraph summarizing its function. With the exception of one individual, every subject achieved this goal. Success was realized by 95% of those experiencing the program.

Behavioral objective 2. Assist the subject in understanding three different ways USU may derive catalog cards: a. National Union Catalog, b. Library of Congress Cards, c. Manually. This will be exhibited by listing the three methods and briefly describing each. The success of this behavioral objective as shown by the test results indicated a weakness in the program. Only 55% of the subjects achieved this goal.

Recommendation. This area must be reprogramed for greater efficiency. Note the recommendations of subjects in the appendix concerning question number two on the test. Also the test question must be revised. Many subjects commented after the experience that they didn't understand the question.

Behavioral objective 3. Acquaint the subject with standard cataloging tools as demonstrated by: a. Find the entry in the National Union Catalog, b. Derive a subject heading from the Library of Congress List of Subject Headings, c. Determine the Dewey Classification number of a book from the Dewey Decimal Classification Tables, d. Ascertain the Cutter number from the Cutter Tables.

In the pre-test, question 3a, 65% of the subjects derived the entry from the National Union Catalog. Observing this phenomena, this writer realized that no great skill was needed to alphabetically derive an entry. The task was made easier by the fact that the particular volume needed was placed with the several cataloging tools at the subject's easy disposal instead of in the multi-volume set. Only one subject was unable to find the entry in the post-test.

Recommendation. If the question concerning the National Union Catalog is contained in subsequent pre-tests and post-tests, the subject should be required to look in the multi-volume set just as catalogers do in searching for an entry.

The subject heading question, 3b, was correctly answered with 70% efficiency on the post-test which represents a 55% improvement over the performance on the pre-test.

Recommendation. This area could stand some improvement, possibly more practical application such as finding two or three subject headings for various books in the experience.

The Dewey number, question 3c, was derived by 85% of the subjects on the post-test. This writer must admit that the number was a relatively easy number to determine as shown by the 25% of the subjects who found the number in the pre-test.

Recommendation. Rework this area to include several practical exercises within the experience to give the subjects an opportunity to more fully grasp the concept of finding Dewey numbers.

Answers to question 3d concerning the Cutter Number improved from the pre-test to the post-test by 65%. Six subjects were unable to find the Cutter Number on the post-test and nineteen were unable to find it on the pre-test.

Recommendation. Many observers from the Technical Services staff expressed the opinion that this aspect was presented too simply. Variations do exist in the Cutter Numbers which were excluded in the program. This should be a future consideration.

Behavioral objective 4. The subject will better understand the information found on a typical catalog card evidenced by his ability to successfully identify major aspects and write their names beside the information on a sample catalog card. The areas of the card to be identified are: author, title, imprint, collation, tracings, notes, call number, and series note.

On the pre-test, question four, 109 points were missed out of the possible 160 for all twenty subjects. Only 12 points were missed on the post-test indicating an improvement of 60.7%.

Recommendation. This section could profit with some improvement. It would lend itself to an entire discussion

and lesson of about 15 to 20 minutes duration. The USU Library could certainly utilize a self-instructional carrel near the main card catalog programmed to instruct patrons how to find books by subject, author, and title, and to inform them of the significance and importance of the various areas on the catalog card.

Behavioral objective 5. The subject will understand the difference and value of shelf list, main card catalog, and divisional listings of materials as demonstrated by answering correctly a short true and false quiz.

This objective was deemed fairly successful by an improvement of the subjects of 55.8%. However, question number seven in the pre-test and post-test concerning the availability of the shelf list should be revised. The question stated, "The shelf list is accessible to all patrons of the library." The answer is debatable. The shelf list is accessible but patrons are not generally encouraged to use it. This question drew comments from individuals, especially those who work in Technical Services.

This writer felt that the true and false section of the test was a valid means of testing the comprehension of the subjects of the various card catalogs. Instructions preceded each test to leave the spaces blank if the answers were not known.

Observations

Although the intent and purpose of this study was not

to compare the achievement of the males with the females, several interesting observations were noted. The overall per cent of improvement of the men was 9.5% less than the women. (See Table 2) One might generalize that the men did not do as well in the program unless the range of the questions answered correctly in the pre-test was considered. This range for the males was 17.4%-52.2% as compared with the range of the females of 0%-39.1%. Careful analysis indicated that the men knew more about cataloging and the Technical Services before experiencing the program in the carrel. On the post-test the ladies scored from 26%-100% correct while the men ranged from 56.5%-95.6%. Note the men had less range to improve which clarifies the phenomena.

Further comments could be made concerning the total time and number of repeats and stops, but the nature of this study was to determine if self-instruction could assist in teaching the processes and procedures of the Technical Services of the USU Library. The per cent of improvement was felt to be the most significant factor. The subjects showed an overall improvement of 57.4%.

Additional recommendations

The shelf list instructions must be clarified. Almost all of the subjects had to ask where to locate the shelf list. The tape script mentioned that the shelf list was directly in front of the carrel. The subjects became confused when they stopped the tape and took off the ear phones.

Table 2. Range, mode, median, and mean of data

Category	Range	Mode	Median	Mean
<u>Age</u>				
Female	14-56	32	28	28.3
Male	24-43	27, 29	29	31.5
Combination	14-56	29	28.5	29.8
<u>Time-Pre-Test (min.)</u>				
Female	5-20	10, 12	12	12.2
Male	7-30	15, 20	15	16.7
Combination	5-30	10, 20	12.5	14.2
<u>Time-Carrel (min.)</u>				
Female	46-60	45	46	48.5
Male	45-67	45	46	49.4
Combination	45-67	45	46	48.9
<u>No. of stops</u>				
Female	1-2	1	1	1.3
Male	0-8	1	1	2.5
Combination	0-8	1	1	1.8
<u>No. of repeats</u>				
Female	0-15	0	1	3.0
Male	0-12	0	0	3.3
Combination	0-15	0	0.5	3.1
<u>Time-Post-Test (min.)</u>				
Female	12-30	20	20	21.1
Male	12-23	20	18	17.7
Combination	12-30	20	20	20.6
<u>Time-total (min.)</u>				
Female	63-100	82	82	81.7
Male	69-105	80	82	83.8
Combination	63-105	80, 82	82	82.6
<u>Pre-Test-%Correct</u>				
Female	0-39.1	21.7	21.7	18.9
Male	17.4-52.2	30.4	30.4	33.8
Combination	0-52.2	30.4	28.2	25.6
<u>Post-Test-%Correct</u>				
Female	26-100	82.6	82.6	80.6
Male	56.5-95.6	87	87	86.0
Combination	26-100	87	87	83.0

Table 2. Continued

Category	Range	Mode	Median	Mean
<u>% Improvement</u>				
Female	26-82.6	60.9	61	61.7
Male	26.1-78.2	-	56.5	52.2
Combination	26-82.6	60.9	60.9	57.4

The program needs more reviews. These could possibly be accomplished by additional slides dealing with the area being reviewed.

Incorporation of more practical experiences in the program is highly recommended as noted from the many suggestions to this effect on the post-test. This feature was considered by many as an area of needed improvement.

Questionable is the technique of color coding as employed to indicate different areas of the system on the back of the carrel wall and also on the tape deck control knobs. Two of the nine male subjects tested were severely color blind and both experienced difficulties as colors were referred to. This problem could easily be eliminated by using digital forms for identification rather than colors.

For selected recommendations and suggestions from the subjects, see the appendix.

This writer proposes that self-instruction can greatly assist in the initial training of new employees in the

Technical Services of the USU Library. As one considers the rather unique situation as new personnel come into the Technical Services, self-instruction can offer a flexible, individualized, and personal means to convey necessary information.

Several recommendations significant to future programs are: (1) to limit the area studied and presented in the self-instructional situation and (2) to shorten the total time of the experience. For example, in 20 minutes instead of 45 minutes, the carrel could be programed to instruct the staff on variations of titles and how these variations appear on catalog cards.

The response of the subjects, staff members of Technical Services, and other interested individuals was most heartening. Almost without exception, the people who are engaged in the teaching profession commented after experiencing the program, "How I could use this in teaching," or, "Imagine what I could do with this in my school."

As mentioned previously, this writer highly recommends consideration of self-instructional programs and carrels to be placed near the card catalogs to assist patrons in various reference problems. Divisions of the library could also utilize carrels in presenting small lessons or even programs describing collections of which patrons are not aware. Of concern to this writer is the collection of Government Documents of which USU is a depository. Students are hesitant if not apprehensive to search this collection.

A self-instructional carrel programed to orient patrons to the accessibility of these documents would greatly increase the utilization of this valuable collection.

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APPENDIX

PRE-AND POST-TEST

1. In a short paragraph, summarize the work accomplished in the Technical Services of the USU Library.
2. USU derives the information for its catalog cards from three different sources. What are they? Briefly describe each.
 - a.
 - b.
 - c.
3. Before you is a book to be cataloged and classified. Can you:
 - a. find its entry in the National Union Catalog?
no _____
yes _____ page _____
 - b. select one suitable subject heading from the Library of Congress List of Subject Headings?
no _____
yes _____ Subject Heading _____
 - c. determine the Classification Number from the Dewey Classification Tables?
no _____
yes _____ Classification Number _____
 - d. find the Cutter Number from the Cutter Author Tables?
no _____
yes _____ Cutter Number _____

4. In the spaces provided, identify each area represented on the typical catalog card: title, author, tracings notes, collation, imprint, series note, and call number.

301.362 Buder, Stanley.

B927

Pullman; an experiment in industrial order and community planning. N.Y., Oxford Univ. Press, 1967.

xii, 263 p. illus., port. 22 cm. (The Urban life in America series)

Bibliographical references included in "Notes" (pp. 235-255)

1. Pullman, Ill.

I. Title.



True and False Questions

Fill in the blanks with true or false.

- _____ 1. The difference between the main card catalog and the shelf list is that books are alphabetically listed in the shelf list.
- _____ 2. The shelf list is a record of all the books being ordered for the library.
- _____ 3. A division card catalog contains a listing of all the books in the library.
- _____ 4. The cards in the shelf list are entered alphabetically by title and/or author.
- _____ 5. The main card catalog is located on the second floor of the USU Library.
- _____ 6. Cards are entered by call number in the main card catalog.
- _____ 7. The shelf list is accessible to all patrons of the library.

The following question was present on the post test only.

Please list improvements that you feel would add to the effectiveness of this self-instructional carrel.

Table 3. Pre-test, post-test, carrel, and total time in minutes

Subjects	Pre- Test	Post- Test	Carrel			Total
<u>Female</u>	Time	Time	Time	Stops	Repeats	Time
1.	12	15	45	1	0	72
2.	8	18	55	1	8	81
3.	10	20	60	1	15	90
4.	11	30	45	1	0	86
5.	20	30	50	2	0	100
6.	10	25	45	1	1	80
7.	12	20	50	1	6	82
8.	13	19	46	1	2	78
9.	17	23	45	2	1	85
10.	16	20	46	1	0	82
11.	5	12	46	2	0	63
<u>Male</u>						
1.	25	12	45	0	0	82
2.	20	15	45	3	0	80
3.	30	20	47	1	2	97
4.	15	20	50	1	5	85
5.	15	23	67	7	11	105
6.	7	18	45	1	0	70
7.	8	17	55	8	12	80
8.	10	14	45	1	0	69
9.	20	20	46	1	0	86

Table 4. Raw scores, percents, and percent improvement on pre-test and post-test

<u>Subjects</u>	<u>Age</u>	<u>Pre-Test</u>		<u>Post-Test</u>		<u>Percent Improvement</u>
		Raw Score	Per- cent	Raw Score	Per- cent	
<u>Female</u>						
1.	19	5	21.7	22	95.6	73.9
2.	18	1	4.3	16	69.5	65.2
3.	14	0	0.0	6	26.0	26.0
4.	29	3	13.0	18	78.3	65.3
5.	32	0	0.0	19	82.6	82.6
6.	56	7	30.4	20	87.0	56.6
7.	23	5	21.7	19	82.6	60.9
8.	25	7	30.4	23	100.0	69.6
9.	35	5	21.7	19	82.6	60.9
10.	28	6	26.0	20	87.0	61.0
11.	32	9	39.1	22	95.6	56.6
<u>Male</u>						
1.	27	12	52.2	20	87.0	34.8
2.	24	9	39.1	22	95.6	56.5
3.	43	7	30.4	13	56.5	26.1
4.	29	7	30.4	21	91.3	60.9
5.	41	7	30.4	20	87.0	56.6
6.	28	4	17.4	22	95.6	78.2
7.	27	4	17.4	21	91.3	73.9
8.	29	9	39.1	19	82.6	43.5
9.	36	11	47.8	20	87.0	39.2

The raw score represents the number correct out of 23 items.

Recommendations suggested by subjects

1. Need more reviews of the diagram (system) at the front as we go through the tape. People are lazy. If not told to review, they won't.
2. Question 3b is confusing.
3. I think only that I needed more time so as to be released from some pressure. I do believe however, that too much time would reduce the effectiveness of the program.
4. The use of the index and tables needs some expanding.
5. More automated. (Cassett tape recorder)
6. Questions too heavy loaded.
7. Took the program for the test.
8. Interpretation of question 2 ambiguous. Need the word methods instead of sources.
9. The carrel is put together effectively; easily followed and informational. The only criticism would be the amount of material covered, and length. I found it was difficult to remember the whole process of cataloging. The carrel from a standpoint of conveying to the listener this amount of information would have to be given more than one time.
10. Have an index available to specific portions of the tape.
11. Have a self test on cataloging the books, right on the tape.
12. Have more detail in looking up a Dewey number.

13. Need the opportunity to repeat and fill out several library cards.

14. Run it slightly slower for people with run down reflexes.

Reference

Booklet

STATE UNIVERSITY LIBRARY										PERMANENT COLLECTION									
Jaques, H. E.																			
TITLE																			
How to know the weeds																			
DATE																			
9/23/68										\$3.25									
COST										I I									
W. C. Brown																			
Dubuque, Iowa																			
Dr. John Smith																			

Original Order Card

Example A

P.O. No.		THIS IS AN ORDER Please Send Invoice in Triplicate Listing Purchase Order No. To		LIBRARY UTAH STATE UNIVERSITY LOGAN, UTAH 84321	
FUND	AUTHOR Jaques, Harry Edwin				
DATE ORDERED	TITLE How to know the weeds				
DEALER	PRICE \$3.25		NO. OF COPIES I	YEAR 1959	
COST	PUBLISHER W. C. Brown				
DATE REC'D	RECOMMENDED BY Dr. John Smith				
CALL NO.	SIGNED BY: ACQUISITIONS DEPT.				

Order Form

Example B

DUPLICATE INVOICE

1 15.00 10.23 10		18.50	
DATE 7-5-69		INVOICE NO. 421003	
CUSTOMER'S ORDER NUMBER		TERMS - 30 DAYS NET	
18.50		18.50	

SHIP TO

BILL TO

LIBRARY
 1015 BROADWAY
 7-10, PM 1000

BY OF 500.000000

PLEASE MAKE PAYMENTS ON THIS INVOICE

NO OTHER STATEMENT WILL BE SENT

Stacey's

SEWING & PROFESSIONAL BOOK CENTER

2575 HANOVER STREET, PALO ALTO, CALIFORNIA 943

PHONE (415) 326-9955

80

Invoice Example C

Johnson, Elmer D

Johnson, Elmer D

Johnson, Elmer D

Johnson, Elmer D

Johnson, Elmer D

Communication; an introduction to the history of writing, printing, books and libraries, by Elmer D. Johnson
3d ed. New York, Scarecrow Press, 1966.

304 p. 22 cm.

Includes bibliographies.

THIS IS YOUR SET OF CATALOG CARDS

1. Libraries—Hist. c. Title.

Z74.L3 1966

027.609

66—

Library of Congress

.63m70h

LC Cards

Example D

Copyright © 1959
by Henry Holt and Company, Inc.
Library of Congress Catalog Card Number: 59-6700

22934-0119

Printed in the United States of America

LC Order #

Example E

632.58 Jaques, Harry Edwin, 1880-
J276 How to know the weeds; pictured keys for

1

Weeds.
632.58 Jaques, Harry Edwin, 1880-
J276 How to know the weeds; pictured keys for
identifying the more common weeds of farm and

2

How to know the weeds.
632.58 Jaques, Harry Edwin, 1880-
J276 How to know the weeds; pictured keys for
identifying the more common weeds of farm and
garden, with interesting facts concerning
them. Dubuque, Iowa. W. C. Brown Co. [1959]

3

230 p. illus. 22cm. (Pictured-Key Nature
Series)

Bibliography: p. 100-200.

1. Weeds.

I. Title.

Author, Subject, Title-Cards

Example F

THIS BOOK IS TO BE KEPT IN THE

THIS CARD MUST REMAIN

NSU

LIBRARY

STATE UNIVERSITY

LIBRARY

UTAH STATE UNIVERSITY
LIBRARY

Call Number.....

Check out Card.....

Example G.....

P.O. No.	LIBRARY UTAH STATE UNIVERSITY LOGAN, UTAH 84321		L.C. CARD NO.
FUND	AUTHOR Jaques, Harry Edwin		
DATE ORDERED 7/23/68	TITLE How to know the weeds		
DEALER Stacey	PRICE \$3.25	NO. OF COPIES 1	YEAR 1955
COST \$3.25	PUBLISHER H. C. Brown		
DATE REC'D 3/5/69	RECOMMENDED BY Dr. John Smith		
CALL NO. 632.59	SIGNED BY:		
0270	THE BOOK YOU REQUESTED IS NOW IN THE LIBRARY		

Notification Card

Example H

VITA

Heber Clark Barzee

Candidate for the Degree of

Master of Education

Report: A Self-Instructional Program for the Technical
Services of the Utah State University Library

Major Field: Instructional Media and Library Science

Biographical Information:

Personal Data: Born at Idaho Falls, Idaho, November
21, 1940, son of Arlo Everett and Sarah Hammon
Barzee; married Jessie Lynne Lovell June 28, 1963;
two children--Adele and Stanley.

Education: Attended elementary school in Hamer, Idaho;
attended Roberts High School and graduated from
West Jefferson High School in Terreton, Idaho in
1959; attended Brigham Young University and Ricks
College and received the Bachelor of Arts degree
from Idaho State University with a major in
Elementary Education in 1966; completed require-
ments for the Master of Education degree in
Instructional Media and Library Science at Utah
State University in 1969.

Professional Experience: Taught 5th grade at Burton
Elementary School, Rexburg, Idaho, 1966-67;
served as Principal and teacher at Newton Eleme-
ntary School, Newton, Utah, 1967-68; served as
graduate assistant in Instructional Media and
Library Science Department, Utah State University,
1968-69.