DURING THE PAST TWENTY years, the school library has emerged as the school library media center. The school library of the past functioned as a central place for depositing books, periodicals, and pamphlets for use by students and teachers as needed. Reference materials did not circulate. Few, if any, nonbook resources were found in the library. Instruction in the use of resources was minimal and not related to the curriculum. The collection was well-organized, silence was the basic rule, and the librarian worked in isolation from teachers. The school library, which mainly existed at the secondary level, was viewed, at best, as an educational support service.

Federal funds granted through the Elementary and Secondary Education Act of 1965 and of 1975 along with technological advancements had a tremendous impact on education. In many schools, the traditional classroom became the open classroom. The textbook was replaced by a multi-media approach to teaching and learning. Team teaching became common, as did individualized instruction and independent study. Teaching and learning moved from rote memorization to an emphasis on discovery, inquiry, problem solving, comprehension, and utilization.

The educational changes of the 1960s and 1970s have shaped the development of the school library of the 1980s. The school library media center has become the "laboratory and workshop" envisioned as early as 1913 by Lucille F. Fargo. Print and nonprint media are available

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equally to students and teachers. Activity has replaced the traditional silence. Instruction in the use of resources became related to the curriculum and the library media specialist has become a partner in the teaching/learning process. During the 1960s and 1970s, the number of centralized elementary school library media centers increased from 34.1 percent during the 1958-59 school year to 81.1 percent in 1974.²

Reference service underwent many changes during the 1960s. The school library media specialist was no longer interested in simply responding to requests for information. The Standards for School Library Programs, published in 1960 by the American Association of School Librarians (AASL) defined the principles that still guide the development of reference service in schools. The document stated that:

1. Students use the school library as a laboratory for reference and research in which they locate specific information and expand their knowledge by using a wide variety of printed and audio-visual materials.

2. Research or reference work, whether done individually by students or in groups under the guidance of teacher and librarian, forms an important element in that part of the instructional program that is concerned with teaching students to analyze, evaluate, and interpret.

3. An integrated program of library instruction taught throughout their school career enables children and young people to acquire independence and competency in their search for information and their use of materials....Nevertheless, the mere processes of locating materials or of finding information are not always profitable uses of a student's time, and thus, whenever appropriate, the library staff performs services of this nature for the student.³

Reference service in the schools of the 1980s and beyond is linked to an understanding of student uses of resources and facilities, to the increased involvement of school library media programs in networks, to the further development of bibliographic instruction at all levels, to the increased use of computer technology in school library media centers, and to the availability of funds from federal, state and local sources.

The National Center for Education Statistics conducted a survey of public school library media centers in 1978 covering the 1977-78 school year. The survey, Statistics of Public School Library/Media Centers 1978, reported that of the 85,063 public schools surveyed, 84 percent had a library media center. Public school library media centers held 541 million volumes. Secondary school library media centers averaged 1119 uses per week as compared to 629 for elementary schools. School library
School Library Media Centers

media centers held 3.8 million periodical subscriptions. The survey reported that there were 19.2 million reference transactions. The average number of weekly transactions per library media center was 271.4

The Information Function of the School Library Media Center

The current national standards for school library media programs are a joint endeavor of AASL and the Association for Educational Communications and Technology (AECT). Published in 1975, Media Programs: District and School defines the concept of the library media program and treats reference service as a part of the information function. According to Media Programs: District and School: "Programs of media services are designed to assist learners to grow in their ability to find, generate, evaluate, and apply information that helps them function effectively as individuals and to participate fully in society." The document details four interrelated functions of the library media program that are derived from the behavior of the library media specialist. These functions—design, consultation, information, and administration—are interwoven into all parts of the library media program.

In analyzing the information function, the national guidelines state: "The information function relates especially to providing sources and services appropriate to user needs and devising delivery systems of materials, tools, and human resources to provide for maximum access to information in all its forms." Elements of the media program essential to the information function include:

1. identifying users' needs for information;
2. providing reference service to users;
3. providing bibliographic service to users;
4. promoting functional knowledge of the variety of resources and approaches for obtaining information;
5. providing access to information available from outside agencies, including networks; and
6. providing resources and guidance in their use in response to the individual user's needs, interests, and learning styles.

Media Programs: District and School calls for a program that is structured and sequential and yet flexible. The standards clearly recognize that, "In all curriculum areas teachers and students seek information on appropriate levels and in suitable formats." The document further notes that "media [print and/or nonprint resources] help to identify the problem and supply information and method to solve it."
Reference service is an integral part of the information function. It does not stand alone, easily separated from the other activities occurring in the library media center. Instruction in library media center use, assistance in the identification and utilization of appropriate media, and provision of ready-reference services are all a part of the library media program.

*Media Programs: District and School* deals with programs, hence reference service, at four levels—school, district, regional, and state. In addition, it discusses the importance of networks to school library media programs. The guidelines stress the importance of teachers and students having access to information and information sources.

**The Library Media Program**

The library media program is an integral part of a school district's educational program. It is a unified program that incorporates reference and other information management skills into the curriculum. According to Davies, the district library program is: "[A] plan, both developmental and operational, designed and structured to achieve the fullest realization of district educational goals and objectives through the integration of library media service and the instructional process." She defines the building-level library media program as: "A developmental and operational plan wherein the building library media center functions as a learning laboratory where the use of all media, print and nonprint, is purposeful, planned, and integrated with the educational program and instructional processes...." Such a philosophy allows for the design and development of a library media skills program that is planned and sequential, that enables students to meet their educational and personal information needs, and that prepares them to become life-long library users. Information management skills are requisite to success in an information age and must be taught to students beginning at the elementary level.

Library media skills include the traditional reference skills such as the use of the encyclopedias and indexes as well as newer skills related to audiovisual and computer technologies. These skills are not taught in isolation from the curriculum, and therefore, the design of a library media skills program requires, first of all, an identification of the skills that need to be taught and then an analysis of the skills in terms of their relationship to the curriculum and to a grade level. The library media program, which needs to be developed cooperatively by teachers, administrators, students, and library media specialists, provides for the
systematic introduction, reinforcement, and extension of reference and
other library media skills.

In The School Library Media Program: Instructional Force for
Excellence, Davies includes the "Thinking-Learning-Communicating
Skills Continuum, K-12" as a tool for use in developing a library media
skills program integrated with the curriculum. Table one provides
examples of learning skills related to locating information. The skills
continuum developed by Davies includes all skills and not only those
directly related to the library media program.

The National Council for the Social Studies developed "Social
Studies Skills: A Guide to Analysis and Grade Placement" that was
published in Skill Development in Social Studies. It related library
resources and skills to the social studies curriculum. The yearbook also
identified principles that teacher and library media specialists should
apply in designing programs to teach reference and other skills. These
stress that:

1. The skill be taught as an integrated part of a unit of study and as
   needed by the learner.
2. The learner be motivated to acquire and to develop the skill.
3. The learner be supervised in his/her initial attempts to apply the
   skill.
4. The learner be given repeated opportunities to apply the skill based
   upon his/her performance.
5. The learner be given individual assistance based upon testing and
   follow-up activities.
6. Skill instruction be provided at increasing levels of complexity.
7. Skills be applied through various learning situations so that a
   transfer of learning can take place.
8. Skills be developed concurrently.

As previously noted the library media program is a cooperative
effort of the school community. The skills that relate to information use
need to be incorporated into the syllabus of each course. It is not enough
for the library media specialist to identify the skills and to relate them to
the curriculum. Teachers need to understand the importance of inform-
ation skills and their relationship to the curriculum. The teacher and
the library media specialist must plan together to make students compe-
tent in their search for information and in their use of it.
### Table 1: THINKING - LEARNING - COMMUNICATING SKILLS CONTINUUM, K-12

#### Part Two: Learning Skills

<table>
<thead>
<tr>
<th>I. Locating Information</th>
<th>Introduce</th>
<th>Reinforce</th>
<th>Extend</th>
</tr>
</thead>
<tbody>
<tr>
<td>D. Make effective use of encyclopedias</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Using encyclopedias as data sources for information about</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>a. Persons</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>b. Places</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>c. Things</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>d. Events</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>e. Processes</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Recognizing the distinguishing characteristics of</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>a. General encyclopedias</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>b. Special encyclopedias</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Gaining facility in using</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>a. Key words</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>b. Guide words</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>c. Cross references</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>d. Indexes</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>e. Reference outlines and study guides</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>f. Illustrations</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Updating encyclopedias by checking annuals and yearbooks for</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>a. Art</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>b. Business</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>c. Chronologies</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>d. Drama</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>e. Education</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>f. Fashion</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>g. International affairs</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>h. Legislation</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>i. Literature</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>j. Medicine</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>k. Motion pictures</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>l. Necrologies</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>m. Politics</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>n. Radio and television</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>o. Science</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>p. Special reports on major issues</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>q. Sports</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>r. Transportation</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>s. Urban problems and development</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>t. Year in review</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Recognizing limitations of encyclopedic information</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>a. Serves as an introduction; provides an overview of skeletal facts</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>b. Serves as an outline identifying main topics to be researched further in other sources</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
H. Make effective use of U.S. Government documents, publications and indexes

1. Recognizing the distinguishing characteristics and informational value of federal documents
   a. Congressional documents
      - The Congressional Record
      - House and Senate Reports and Documents
      - Bills, resolutions, acts, statutes, laws
      - Hearings and Committee Prints
   b. Judicial documents
   c. Executive documents
      - Federal regulations
      - Department documents
      - Presidential documents

2. Recognizing the distinguishing characteristics and informational value of indexes to U.S. government publications
   a. Monthly Catalog is the only comprehensive, current listing
   b. Selected U.S. Government Publications is issued biweekly
   c. Price Lists are issued by 80 departments and agencies


I. Make effective use of pamphlets

1. Recognizing the distinguishing characteristics and informational value of pamphlets
   a. Unbound publication
   b. Fewer than 100 pages
   c. Complete in itself
   d. Excellent sources on current topics not available in book form

2. Recognizing that unbound pamphlets are usually not filed with books
   a. Usually filed in filing cabinets (vertical files); arranged alphabetically by topic or subject
   b. Most important pamphlets are usually listed in the card catalog

3. Recognizing that the following are prolific sources of pamphlet material
   a. Local, state, and national governments
   b. The United Nations
   c. Associations
   d. Business and industry

Instruction

Teaching library media skills is the shared responsibility of the classroom teacher and library media specialist. A systematic planning process must be established between teachers and library media professionals. During a planning session, the teacher and library media specialist need to assess the role of the library media center in the development of the instructional unit and in meeting class and individual needs. Together they must identify:

1. specific instructional objectives;
2. specific content;
3. specific library media skills to be introduced, reinforced, and/or extended;
4. specific resources;
5. specific teaching-learning strategies;
6. specific means for future application of library media and other skills learned; and
7. specific evaluation procedures.

Techniques of providing library media instruction are as diverse as the schools in which the methods are employed. Some library media specialists are traditional in their use of instructional modes and rely heavily upon the lecture supplemented with sound filmstrips, transparencies, and worksheets. Others are innovative and utilize self-paced, mediated instructional packages; videotaped demonstrations on the use of specific reference sources; and programs developed for use on a microcomputer. As school library media centers go online for access to bibliographic databases, the library/media specialist will need to rethink instructional priorities and methods.

School districts have developed and packaged their library media program in varying degrees and in different formats. The Upper Merion (Pennsylvania) Area School District designed a library media program for kindergarten through grade twelve entitled *Action and Interaction*.

The two-part guide, for elementary and secondary levels, identifies goals and specific objectives for each goal and the grade levels for each skill. A chart at the beginning of the guide indicates whether a skill is to be introduced, reinforced, or extended.

The guide, under each of the five goals for students, suggests action for which the library media specialist is responsible and interaction between the teacher and library media specialist to achieve each goal. *Action and Interaction* identifies library media skills but allows individual teachers and library media specialists to determine curriculum
School Library Media Centers

relationships and specific teaching-learning strategies. Tables 2 and 3 provide examples of library media skill development.

<table>
<thead>
<tr>
<th>Table 2</th>
<th>ELEMENTARY LIBRARY MEDIA PROGRAM</th>
</tr>
</thead>
<tbody>
<tr>
<td>GOAL THREE - SEARCHING MATERIALS</td>
<td></td>
</tr>
<tr>
<td>OBJECTIVE 3 - REFERENCE COLLECTION</td>
<td></td>
</tr>
<tr>
<td>A) The student will be able to locate information in an encyclopedia</td>
<td></td>
</tr>
<tr>
<td>ACTION</td>
<td>K-2</td>
</tr>
<tr>
<td>Students will come to library for enrichment; librarian will assist individually.</td>
<td></td>
</tr>
<tr>
<td>ACTION</td>
<td>3-4</td>
</tr>
<tr>
<td>Students will discuss role of encyclopedias as first source of general information. (FILMSTRIP)</td>
<td></td>
</tr>
<tr>
<td>Students will review encyclopedia for charts, graphs, maps; students will discuss need for updating information.</td>
<td></td>
</tr>
<tr>
<td>Students will answer reference questions by using encyclopedias, and will note aids such as guide words, index, and key words.</td>
<td></td>
</tr>
<tr>
<td>ACTION</td>
<td>5-6</td>
</tr>
<tr>
<td>REVIEW 3-4</td>
<td></td>
</tr>
<tr>
<td>Students will discuss arrangement of encyclopedias: alphabetical, topical, and chronological.</td>
<td></td>
</tr>
<tr>
<td>Students will review various types of encyclopedias: general, historical, scientific, and other.</td>
<td></td>
</tr>
</tbody>
</table>

Another approach is used by the School District of Lancaster, Pennsylvania. The library media skills have been identified in a general way at the elementary and secondary levels. Flexibility is emphasized, as is continuous planning and evaluation at two levels—among curriculum coordinators and among building-level teachers and library

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### TABLE 3 SECONDARY LIBRARY MEDIA PROGRAM

<table>
<thead>
<tr>
<th>GOAL THREE</th>
<th>RESEARCH MATERIALS</th>
</tr>
</thead>
</table>

**OBJECTIVE - REINFORCE AND EXPAND**

**C - Reference Tools**

**Grades 7-12**

**ACTION**

Students will identify and use the various kinds of reference tools.

**INTERACTION**

Teachers may wish to reinforce the use of the various reference tools by making specific assignments.

**Encyclopedias**

**General Examples:**

- Encyclopaedia Britannica
- Encyclopedia Americana
- The World Book Encyclopedia

**Special Examples:**

- Encyclopedia of World Art
- Grzimek's Animal Life Encyclopedia
- McGraw Hill Encyclopedia of Science and Technology

**Indexes (Indices)**

**Examples:**

- Education Index
- Reader's Guide to Periodical Literature
- Social Sciences and Humanities Index

**Special Subject Area Tools**

**Examples:**

- Book Review Digest
- College Blue Book
- Granger's Index to Poetry
- International Library of Negro Life and History
- New Oxford History of Music
- Short Story Index

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media specialists. After instruction has been given, students and teachers are provided with formal and informal methods of evaluating the instruction. An example of an evaluation form is found in table 4. A variety of instructional modes are used. Table 5 is an example of a pathfinder used with a senior high school composition class. Students are encouraged to identify community sources of information and to use public and college libraries and special libraries such as those found at the historical society and newspaper. Table 6 identifies senior high school skills, and their curriculum relationships.
Recently you were given an introduction to library use and resources before starting to locate information for a general research paper. It would be helpful to the librarians if you would indicate as honestly as you can how useful various parts of this introduction were in helping you to understand library organization and to locate the information you needed.

Please circle the number representing the value to you of each part of this presentation:

<table>
<thead>
<tr>
<th></th>
<th>Not Useful</th>
<th>Moderately Useful</th>
<th>Very Useful</th>
</tr>
</thead>
<tbody>
<tr>
<td>a) Pretest and discussion on general library knowledge</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>b) Outline of search procedure</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>c) Handout listing selected reference materials as well as periodical and other indexes</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>d) Pathfinder activity</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
</tbody>
</table>

In addition, please answer the following questions:

e) Was the time allowed for items a) to d) above too long ___, too short ___, about right _____?

f) Do you have any suggestions as to changes that would make this introduction more useful to you? (Use back of sheet if more space is needed.)

g) Did you use libraries other than McCasey's in obtaining materials for your paper?

If yes, what other libraries did you use?

h) Additional comments?

Prepared by: Library/Media Department, School District of Lancaster, Lancaster, PA 17602.

<p>| | |</p>
<table>
<thead>
<tr>
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<tbody>
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<td></td>
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</tr>
</tbody>
</table>

WINTER 1983
Table 5  PATHFINDER

Comp. I  3/82

NAME  

A PATHFINDER to locating information on

(topic)  

SCOPE of topic or THESIS STATEMENT:

Literature Search Steps:

1. An INTRODUCTORY ARTICLE on this topic can be found in the REFERENCE
   BOOK(S): (Give call number, article title, author, name of reference
   book, date of publication, volume number and paper number.)

2. BOOKS & AV MATERIALS on this topic are given in the card catalog under
   the following: (Consult Sears list of Subject Headings as well as the
   card catalog).
   SUBJECT HEADINGS  Related DEWEY DECIMAL NUMBERS:

3. MAGAZINE ARTICLES on this topic can be located by using
   a. The Readers' Guide to Periodical Literature -- an index to general
      interest magazines.
      Relevant SUBJECT HEADINGS are:
   
   b. INDEX(ES) to specialized magazines (Optional):
      INDEX TITLE(S):  Relevant SUBJECT HEADINGS:

4. Other pertinent CURRENT INFORMATION SOURCES are (Facts on File, Newbank,
   etc.)
   SOURCE TITLE  Relevant SUBJECT HEADINGS:

5. Additional Information Sources particularly useful for this topic are:

Prepared by: Library/Media Department, School District of Lancaster, Lancaster,
PA 17602.

In recent years, many books have been published to provide library
media specialists with principles of library media instruction and with
examples of activities that could be used in developing library media
skills. Among them is Teaching Media Skills: An Instructional Pro-
gram for Elementary and Middle School Students by H. Thomas
Walker and Paula Kay Montgomery.  The authors cover all aspects of
### Table 6: Senior High School Skills Program

**School District of Lancaster**  
Senior High School Library Media Skills  
August, 1981

<table>
<thead>
<tr>
<th>Skill</th>
<th>Content</th>
<th>Curriculum Area</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Level 10-11-12</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td>Locate resources in the IMC.</td>
<td>2. Orientation.</td>
</tr>
<tr>
<td>b.</td>
<td>Follow a standardized process for researching information for oral and written reports.</td>
<td></td>
</tr>
</tbody>
</table>

Prepared by: Library/Media Department, School District of Lancaster, Lancaster, PA 17602.

Library media skills instruction including such areas as writing behavioral objectives, planning units, evaluating student performance, and implementing a program; and they give examples of lessons related to a subject area in a general way that may be adapted to actual situations. Table 7 illustrates an activity related to the reading and language arts program using *Webster's Biographical Dictionary*.
# TABLE 7  
**REFERENCE SKILL**

### Reading and Language Arts - Biography

**Media Skills Objective:** Use subject-oriented resources to find specific information.

**Level:** 6-8

**Learning strategy:** Practice; game-puzzle

**Performance Objective:** Given eight last names of famous people and Webster's Biographical Dictionary, the student will find the complete names in order to finish the puzzle.

**Resources:** Puzzle, Webster's Biographical Dictionary, and a pencil.

**Activity:** Biographic Triplets

**Directions:**

The first names of these famous men are made up of triplets—groups of three letters—which may be taken from anywhere in the letter box illustrated below, reading from left to right. An example of G E O and R G E which spells George. Cross out the triplets in the box as you use them. Use Webster's Biographical Dictionary to identify the names. A few triplets will remain in the box. When properly arranged, they will form another name.

L O U Q U I A R D
U E L R O B G E O
N C Y S A M G O R
R G E E E E E R T
G R E C A L E D W
V I N U T H E L E

**Names:**

<table>
<thead>
<tr>
<th>Bruce</th>
<th>July 11, 1274</th>
</tr>
</thead>
<tbody>
<tr>
<td>Colt</td>
<td>July 19, 1814</td>
</tr>
<tr>
<td>Eastman</td>
<td>July 12, 1854</td>
</tr>
<tr>
<td>Gehrig</td>
<td>July 19, 1903</td>
</tr>
<tr>
<td>Adams</td>
<td>July 11, 1767</td>
</tr>
<tr>
<td>Coolidge</td>
<td>July 4, 1872</td>
</tr>
<tr>
<td>Dupont</td>
<td>June 24, 1771</td>
</tr>
<tr>
<td>Greig</td>
<td>June 15, 1843</td>
</tr>
</tbody>
</table>

**Name left over:** Mendel

**Assessment Criteria:** The student will correctly complete the puzzle.

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The use of games to teach library media skills has become very popular among elementary and junior high school library media specialists. Workshops on library media games are popular at conferences.
School Library Media Centers

and common at library schools that have a school library media emphasis. Two examples of books available on gaming are *Games for Information Skills* by Margaret R. Tassia and *Gaming in the Library Media Center* by Irene Wood Bell and Robert B. Brown.

In *Games for Information Skills*, Tassia provides complete instructions for the construction and playing of games on the use of the dictionary, card catalog, indexes, and reference books and on library citizenship and literature. Her introduction discusses the theory of games and its application to those games used in library media instruction. The games, developed by Tassia and her library science students, are related to a particular skill and can be easily adapted for use with a subject area. Bell and Brown in *Gaming in the Media Center Made Easy* provide ninety-eight games for all types of students. The games encompass all of the basic library media skills including the use of audiovisual software and hardware. These games, too, are adaptable to many curriculum situations.

The concern of library media specialists for library media program development and for actual instruction is reflected in the demands for workshops at national and state conferences. During the 1982 ALA Philadelphia Conference, AASL sponsored a two-day preconference on “Meaningful Library Skills, K-12: How Many? How Communicated?” The preconference emphasized the teaching and integration of library media skills with the whole school curriculum. AASL also provided several sessions on library media skills development at the 1982 meeting in Houston and 1980 Louisville conference. In Houston, library media specialists attended such sessions as “Assessing Mastery of Library Media Skills,” “Information Online: High School Students and Databases,” “Role of the Librarian in Basic Skills and Literacy Improvement Efforts,” and “School Librarians as Educators.”

Use of Resources

The development of a reference collection in the school library media center involves a thorough analysis of the curriculum and a thorough knowledge of the students and teachers. The collection needs to keep pace with the availability of new sources of information appropriate for the school and with curriculum revision. Evaluation of the reference collection should involve not only the library media specialist but also students and teachers. Evaluation should be continuous and systematic.
M. Carl Drott and Jacqueline C. Mancall conducted a study of materials and facilities used by metropolitan high school students enrolled in advanced placement courses. The findings are reported in *A Quantitative Inventory of Resource Development and Utilization for Metropolitan High School Students*.

Drott and Mancall examined 1178 papers prepared by students to meet assignments requirements in English, history, social studies, debate, political science, economics, science, and health education. The combined bibliographies of the papers contained 8279 references. The study revealed that 62 percent of the references were to monographs; 19 percent to journals; 7 percent to encyclopedias; 4 percent to newspapers; 3 percent to government documents or pamphlets; 1 percent to nonprint materials; and 4 percent to miscellaneous resources. Drott and Mancall learned that the materials used were not especially current. This was particularly apparent with journals where 30 percent of the students used no articles from the last five years and 21 percent used none from the last ten years.

The study raises questions for library media specialists and teachers regarding the impact of bibliographic instruction upon the actual use of resources by students. The study also revealed the necessity for library media specialists and teachers to make students conscious of the need to use the most current information.

Lucy Anne Wozny conducted a study of fifty-three honor students enrolled in a ninth-grade science class in an upper-middle-class suburban high school. The study "Online Bibliographic Searching and Student Use of Information: An Innovative Teaching Approach" discovered that cooperative training efforts by the teacher and librarian affect the pattern of materials referenced by students. The students all had chosen energy-related topics, used a variety of materials, and made 46 percent of their term paper references to magazine articles. Unlike the Drott and Mancall study, which showed that science students used outdated materials, 80 percent of the students in the Wozny study used materials published during the past two years. Emphasis was placed on the use of current materials.

The students involved in this study received instruction in the use of print indexes and other reference tools. Online searching instruction was given to classes, to small groups and to individuals. Only 19 percent of the students used materials identified through online searching. One of the considerations that students encountered in their online search was the difficulty of securing government documents, conference proceedings, technical reports, and specialized journals. Popular magazines identified through an online search were also identified through standard print research tools.
Both studies revealed that students use more than one type of library to secure information. Wozny discovered that a typical student searched for information in two or three libraries. The school library media center was used by 92 percent of the students; 87 percent used public libraries; 74 percent used home libraries. Drott and Mancall found that 14 percent of the students in their study used only one library.

Online bibliographic access has been available to senior high school students in the Montgomery County (Maryland) Public Schools since 1976. Students in search of information have access to DIALOG and the New York Times Information Bank. After printed sources have been exhausted, requests for information are sent from the library media center to the district’s Professional Library where the search is conducted. Once the resources have been identified, they may be borrowed from other libraries in the state through interlibrary loan.

School Library Media specialists are becoming increasingly aware of the potential of computer technology in meeting the information needs of students and teachers. The 1980s will bring instruction related to the use of databases just as the 1970s brought instruction in the use of audiovisual technology. Budget cutbacks at all levels will necessitate resource sharing and other forms of cooperation among libraries.

_The Role of the School Library Media Program in Networking_ has identified the potential of schools in a national network. Students and teachers need to have access to the latest information that only is available through networks. Networks and the accompanying computer technology will open vast quantities of sources to schools.

**References**

6. Ibid., pp. 6-9.
7. Ibid., p. 8.
8. Ibid.
9. Ibid., p. 6.
10. Ibid., p. 10.
11. Ibid.
12. Ibid.
13. Ibid., pp. 478-534.
15. Ibid., pp. 311-12.
16. *Action and Interaction* is in two parts—elementary and secondary. The guides are available from Leon F. Novak, Director of Library/AV Services, Upper Merion Area School District, King of Prussia, Pa., 19406. The guides were copyrighted in 1977.
17. Information on the library media instructional program is available from Sue A. Walker, coordinator of the Department of Library/Media, School District of Lancaster, McCaskey High School, 445 North Reservoir Street, Lancaster, Pa. 17602.
24. Information regarding online bibliographic services to high school students may be obtained from Karen Dowling, Curriculum Librarian, Montgomery County Public Schools, 850 Hungerford Road, Rockville, Md. 20850.