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ELEMENTARY SCHOOL LIBRARIES

Carrol Francis Krauso

A DISSERTATION

Presented to the Faculty of
The University of Nebraska in the Teachers College
in Partial Fulfillment of Requirements
For the Degree of Doctor of Education
Department of Educational Administration

Under the Supervision of Professor Leslie L. Chisholm
Co-Chairman, Professor David W. Hutcheson

Lincoln, Nebraska

1967

TITLE

ELEMENTARY SCHOOL LIBRARIES

BY

Carrol F. Krause

IN PARTIAL FULFILLMENT OF REQUIREMENTS
FOR THE
DOCTOR OF EDUCATION DEGREE

APPROVED BY

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The writer would like to dedicate this study to his wife, Joan, for her patience and understanding. May we share equally from the benefits received.

G.H.

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CHAPTER I

INTRODUCTION

Innovations in the curriculum, the content, and the methods of instruction have had a tremendous influence on education. Primary emphasis has been on providing for the divergence of abilities and background of experiences which children in the same age group bring to the school. These innovations have been concerned with the development of independent study skills and individual use of resources by the student. Greater emphasis has been placed upon the individual development of the child according to his ability to achieve.

There is available an ever-increasing variety of instructional resources to help the student acquire more knowledge and better understand concepts through his senses of sight, touch, and hearing. A basic problem is to organize these instructional resources so that they will relate more effectively to the processes of teaching and learning.

There are presently three major methods by which library materials are made available in the elementary schools. The first of these methods is to have the materials dispersed throughout the various elementary classrooms. Under this type of arrangement the materials are used primarily in the rooms in which they are housed. The collections have been built

up by the classroom teacher and are under her direct supervision. In some schools the library materials are organized in this manner because of a lack of suitable space within the school to house a central library. In other schools the materials are located within each of the classrooms because of the self-contained classroom concept. Materials located in the classroom makes them more convenient for use by those within the room. The second method is to have all library materials administered directly from a centralized library with none of the library items located in the classroom. This method has the advantage of less duplication of materials and equipment, the availability of a wider range of materials, trained library personnel, and reduced administrative costs. The third method is actually a combination of the other two. Under this method, materials are administered through the central library, however, the classrooms also have a reading corner or library area. As the need arises, these areas are supplied with various library materials on a loan basis from the central library. The materials are then returned to the central library when they are no longer needed. The most common of the three methods in the elementary schools of Nebraska is the decentralized classroom collection.

To date, only a minimum amount of research has been conducted to substantiate the position that a centralized elementary library is more effective than dispersed classroom

collections. Recently, however, a study by Gaver,¹ under the auspices of the U. S. Office of Education, has provided evidence that the centralized library has much to offer over the individual classroom collection.

Classroom collections do not adequately serve the needs of modern-day elementary schools. It is not feasible, financially, to stock each classroom with all of the necessary library materials. The books in these collections are seldom cataloged. This reduces still further their effectiveness in the development of library skills.

A centralized elementary library makes it feasible to provide a greater number and variety of materials suited to the ages, interests, and curricular needs of students and teachers. The resources made available through the central library would include not only an abundance of books, but also charts, recordings, pictures, films, tapes, science specimens, and any other media which will aid in the learning process.

The centralization of library materials in itself does not mean that library services will be improved. To be effective the library program must be integrated with

¹Mary Virginia Gaver, Effectiveness of Centralized Library Services in Elementary Schools, (New Brunswick: Rutgers University Press, 1963).

the over-all instructional program of the school and geared to the needs of the students.

As the centralized elementary library becomes the major resource center of the school, it will provide teachers with bibliographic assistance that will aid in instructional planning and teaching. It also will enable students, not only to develop library skills, but to increase their enjoyment, appreciation, and understanding of good books.

A well designed physical environment in the centralized library must also help people to function more efficiently and effectively. This requires that the library facilities be developed on the basis of properly drawn educational specifications.

I. STATEMENT OF THE PROBLEM

The purposes of this study were to develop guidelines for writing educational specifications for the centralized elementary school library in new school building construction programs and to determine the feasibility of using existing school plants to establish a central library facility.

II. PROCEDURE

A review of the literature pertaining to elementary libraries was made. The purpose of this survey was to investigate the rationale for the establishment of a centralized

elementary school library, to determine its function, and to obtain a better understanding of the facility requirements for effective elementary school library services. The literature examined included the areas of curriculum development, library services, school building planning, and architectural services.

The second step in the procedure involved an investigation of the existing library services provided in seventy selected elementary schools of Nebraska. Two criteria were used to select the schools included in this study. The first was that all schools studied would need to be part of school districts which included the kindergarten and grades one through twelve. The second criterion was that these school systems would need to be either "Minor", "A", or "AA" accredited by the Nebraska Department of Education. The elementary schools actually used were those whose librarian, superintendent, or principal could be readily contacted on a personal basis.

The seventy elementary schools finally selected were then placed into two groups: (1) fifty schools that had their library materials in classroom collections and, (2) twenty schools with centralized elementary libraries. Either the superintendent, principal, or the librarian was personally contacted to determine if space were available

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which could be used to house a centralized elementary school library. Information was also obtained regarding the procedure employed for classification and cataloging of books, and the location of the various library resources within the school.

The second group of twenty elementary schools which had centralized library facilities were personally visited to find out what provisions were made in their libraries in terms of space, equipment, activities, and types of materials housed within the library. A check-list was developed to gather data during the visits to these schools (see appendix).

The third step involved the development of guidelines to be used by school plant planners in writing educational specifications for the centralized elementary library. These were developed from an analysis of the information gathered on existing libraries and from the recommendations found in the literature. In developing the guidelines consideration was given to the various areas which need to be included in a library which functions as a center for a variety of materials.

The fourth and final part of the study involved the formation of such conclusions and recommendations drawn from the findings of the research.

III. DEFINITION OF TERMS

A number of terms have been used to designate the library in the school. Some of the terms used are resource

center, instructional materials center, media center, etc. However, the term library is considered by most librarians to be more meaningful and will obtain more public support for needed improvements in libraries. The American Library Association states that:

The word library is rich in tradition, meaning, and usage, and for at least sixty years, if not longer, the definition of school library has reflected this heritage...A school library does not have to change its name to embrace new materials and new uses of all types of materials any more than a school has to call itself by some other name to indicate that it is a continuously growing social institution.¹

Specific definitions for the three levels of accreditation are not available, however, they are generally characterized as follows:²

1. Minor -- schools having a total minimum program but lack financial resources, enrollment, and district structure to provide a comprehensive program with stability and continuity.
2. Class A -- schools providing a stable and continuous educational program that meets the general needs of all pupils and also provides for the special interests of pupils within the program of studies and activities.
3. Class AA -- schools operating above the Class A level with a comprehensive program of studies which includes adult education, education of exceptional children, coordinated auxiliary services, and experimentation and research in connection with the program.

¹The American Library Association, Standards for School Library Programs, (Chicago: American Library Association, 1960), p. 13.

²Nebraska Department of Education, Approval and Accreditation of Nebraska Public Schools, (Lincoln: Nebraska Department of Education, 1960).

CHAPTER II

REVIEW OF THE LITERATURE

Today's changing educational practices have focused attention upon services and facilities within the entire school. J. Lloyd Trump predicts that:

A variety of instructional and resource areas will replace the present series of standard, stacked classroom cubicles, each designed to contain 30 students and one teacher. Study halls as they are now known will not exist. Instead there will be study-resource rooms where students may read, listen to and view tapes, observe films and slides, work on self-teaching equipment, think, write, and participate in other more or less individual study activities.¹

With the move away from a textbook centered curriculum and toward a curriculum that encourages individual work, outside reading, and research, it is discovered that a small collection of books housed in each classroom will no longer serve the needs of the educational program adequately. Instead more and different types of materials are necessary for the innovations of the elementary school program. It readily can be seen that library facilities must be improved and expanded, especially at the elementary school level.

¹J. Lloyd Trump, Images of the Future: A New Approach to the Secondary School (Washington, D.C.: National Education Association, 1959), p. 28.

I. THE NEED AND PURPOSES OF LIBRARY FACILITIES

Statistics compiled by the U. S. Office of Education in the Spring of 1962, revealed that Nebraska had 3,099 separate school plants and only 16.4 percent of these had centralized libraries (elementary and secondary).¹ This is the lowest percentage of schools with centralized libraries of any state in the United States. This same report reveals that of the 2,632 elementary schools in Nebraska, there were 150 with centralized libraries and 2,482 without.² There is little doubt that the large number of Class I schools of Nebraska have had a great deal of influence on these figures.

The need for library facilities is emphasized by the American Library Association in their most recent standards:

Whatever form the soul-searching regarding the education of youth may take, sooner or later it has to reckon with the adequacy of the library resources in the schools. Any of the recommendations for the improvement of schools, currently receiving so much stress and attention, can be fully achieved only when the school has the full complement of library resources, personnel, and services...In the education of all youth, from the slowest learner in kindergarten to the most intelligent senior in high school, an abundance of printed and audio-visual materials is essential.³

¹Mary Helen Mahar, "Inventory of Library Needs - School Libraries," National Inventory of Library Needs (Chicago: American Library Association, 1955), p. 33.

²Ibid.

³The American Library Association, Standards for School Library Programs (Chicago: American Library Association, 1960), p. 3.

Numerous organizations of educators and librarians have stated what they regard to be the functions of a school library. Those stated by the Committees on Post-War Planning of the American Library Association seem to be the most appropriate and are cited here:

1. Participate effectively in the school program as it strives to meet the needs of pupils, teachers, parents, and other community members.
2. Provide boys and girls with the library materials and services most appropriate and most meaningful in their growth and development as individuals.
3. Stimulate and guide pupils in all phases of their reading that they may find increasing enjoyment and satisfaction and may grow in critical judgement and appreciation.
4. Provide an opportunity through library experiences for boys and girls to develop helpful interests, to make satisfactory personal adjustments, and to acquire desirable social attitudes.
5. Help children and young people to become skillful and discriminating users of libraries and of printed and audio-visual materials.
6. Introduce pupils to community libraries as early as possible and cooperate with those libraries in their efforts to encourage continuing education and cultural growth.
7. Work with teachers in the selection and use of all types of library materials which contribute to the teaching program.
8. Participate with other teachers and administrators in programs for the continuing professional and cultural growth of the school staff.
9. Cooperate with other librarians and community

leaders in planning and developing an over-all library program for the community or area.¹

These same purposes have been advanced in the 1960's by the American Library Association.² There is little doubt that the interpretation of these purposes today is quite different from that which was given to them originally. They do, however, fit current educational thought regarding the school library.

THE CENTRALIZED ELEMENTARY LIBRARY

Two very important objectives of the elementary school library are: (1) to aid the educational program to meet the needs of the students within the school, and (2) to teach self-education skills that can be used after the student leaves school.³ In order for the library to accomplish these objectives it must provide books and other materials for the school's educational program. It must help students to develop an interest in reading and stimulate their interest in many subjects. And, finally, it must lay the groundwork

¹American Library Association, Committees on Post-War Planning, School Libraries for Today and Tomorrow (Chicago: American Library Association, 1945), pp. 9-10.

²American Library Association, Standards for School Library Programs, op. cit., pp. 8-9.

³Lucile P. Fargo, The Library in the School (Chicago: American Library Association, 1947), p. 22.

for lifelong use of the library. This requires a well-planned program suited not only to each of the different age levels but also to the interest levels of the groups to be taught.

Lowrie states that the function of the elementary school library is:

...to assist the child to interpret himself in relation to others and develop in him a better understanding of life about him, to arouse true intellectual curiosity, to introduce to him his rich cultural heritage and to instill understanding of the intrinsic importance of reading and libraries in an informed nation.¹

Arguments for the establishment of centralized elementary library facilities include the need within each school for materials suited to the ages, interests, and curricular needs of its students; organization for easy accessibility; and a program of instruction and guidance by qualified personnel integrated within the curriculum. According to Falk "no phase of the entire school program is in a more strategic position to foster self-learning and to bring meaning and understanding of the ever widening community than the school library."²

Morphet states that "next to the teacher, instructional materials probably have more influence on the

¹Jean Elizabeth Lowrie, Elementary School Libraries (New York: Scarecrow Press, 1961), p. 12.

²Philip H. Falk, "Changes in School Library Services to Meet Changes in School Programs", ALA Bulletin, LI (April, 1957), 266.

educational development of the pupil than any other factor in the school environment."¹ As materials of instruction become more important and as students have more time and reason to use the materials, the library and the staff are required to become more highly involved in the teaching and learning processes.

The National Committee of the Project on the Instructional Program of the Public Schools recommends that "in each school system, there should be one or more well-planned instructional materials and resources centers, consisting of at least a library and an audio-visual center."²

Although the "Certain" standards for elementary school libraries appeared as early as 1925, elementary schools have been primarily served by classroom collections or whatever public library facilities that exist.³ Not until recently has the elementary school library been recognized as a fundamental part of the school program. J. Lloyd Trump states that "it will be difficult to identify the library in the

¹Edgar L. Morphet, Roe L. Johns, and Theodore L. Reller, Educational Administration: Concepts, Practices, and Issues (Englewood Cliffs: Prentice Hall, 1959), p. 407.

²Project on the Instructional Program of the Public Schools, Planning and Organizing For Teaching (Washington D.C.: National Education Association, 1963), p.137.

³National Education Association and American Library Association Joint Committee on Elementary School Library Standards, C.C. Certain, Chairman, Elementary School Library Standards (Chicago: American Library Association, 1925).

conventional sense because its services will permeate the totality of education."¹

A study of the effectiveness of centralized library services in six elementary schools with enrollments ranging from 385 to 724 pupils by Mary Virginia Gaver tested the following hypotheses:

(1) The library category of a school is related to the quality and quantity of materials available for use in the school by children and teachers. (2) The extent to which accessibility of instructional or learning materials is provided for in a school has a relationship to the library category of the school. (3) The method by which instructional materials are made available bears a relationship to the scope and depth of activities in the use of materials by teachers and other personnel. (4) The skill of elementary school students in using library tools and reference books has a measurable relationship to the nature of the provision of materials in the schools. (5) The amount and quality of reading is related to the nature of the library provision in the school.²

Gaver investigated three categories of library organization: (1) the classroom collection, (2) the centralized collection administered by a teacher, and (3) the school library (which is under the direction of a librarian and housed in a separate room). She found the school library

¹J. Lloyd Trump, "Changing Concepts of Instruction and the School Library as a Materials Center", The School Library as a Materials Center, U. S. Office of Education, Circular 708 (Washington, D.C.: Government Printing Office, 1963), p. 6.

²Mary Virginia Gaver, Effectiveness of Centralized Library Services in Elementary Schools (New Brunswick: Rutgers University Press, 1963), p. 51.

organization the most effective organization when the hypotheses were tested with the exception that "Only qualified differentiation was found in favor of the school library for the measure of depth of library-related activities and the measure of quality of reading."¹

In a study at an elementary school in Chicago with a high socio-economic level, Elizabeth Masterton tested the hypotheses that:

- (1) Elementary school students make higher scores on reading tests when the school has a central library and (2) improvement in reading is more marked at all grade levels when a full-time librarian supervises an active library program.²

Reading and IQ scores were studied at three different grade levels. Masterton concluded that factual and graphic evidence supported the original allegations of the study.

Two elementary schools made up of lower middle-class families in Gary, Indiana, were studied by Margaret Monahan. She tested the hypotheses that:

- (1) Students in an elementary school with a central library read more books, (2) ... read more varied books in content and of better quality, and (3) ... make higher scores on standardized reading tests.³

¹Ibid, p. 127

²Elizabeth G. Masterton, "An Evaluation of the School Library in the Reading Program" (Thesis, Graduate Library School, University of Chicago, 1953), cited by Mary Virginia Gaver, *op. cit.* p. XXV.

³Margaret Monahan, "Comparison of Student Reading in the Elementary School with and without Central Libraries" (Thesis, Graduate Library School, University of Chicago, 1956), cited by Mary Virginia Gaver, *op. cit.* p. XXV.

Actual reading was studied for a two month period and reading achievement was studied based on Stanford Reading Tests. Mental ability was studied on the basis of the Otis Test. In the study the first two hypotheses were substantiated, but the third was not.

After studying the effectiveness of elementary library facilities of ten schools in cities with populations ranging from under 2,500 to 472,572, Lowrie concluded:

There is evidence that elementary school faculties which now have such library service are unanimous in their conviction that this is the one facility necessary to an adequate teaching job for today's children.¹

Some authorities believe the teaching of library skills should begin as soon as a child starts to school. As one looks at the basic library skills that should be acquired by elementary students, it is difficult to see how they can be accomplished without access to a centralized library facility. The basic library skills for elementary students presented by Freund are cited here for the purpose of strengthening the case for the centralized library:

Grade 1 Caring for books, listening to stories.

Grade 2 Sharing library books; locating library books, picture books, easy readers.

¹Jean Elizabeth Lowrie, op. cit., p. 211.

- Grade 3 Using parts of a book: title page (author, title); locating library books, shelf labels, fiction, non-fiction; sharing reading experiences by giving oral book reports and re-telling stories.
- Grade 4 Using parts of a book: title page (publisher, date), table of contents, index; using an encyclopedia and dictionary; locating library books by using the card catalog.
- Grade 5 Reading for information: class reports, following a hobby, current events, how to make something; reading for pleasure: story, poetry, magazine and newspaper; using the card catalog's special features: cross references; using special features of encyclopedias: subject index, cross reference, bibliographies, charts, maps, tables.
- Grade 6 Using a variety of indexes to find all available materials for a class report: card catalog, book index, magazine index; note taking; making a bibliography.¹

Independent library skills must be learned. Unless students receive this training early in life they can be handicapped with library tasks throughout their later years of education and life. As stated by Helen Heffernan, "no one who has taken the trouble to go and see children at work in an elementary school library will doubt its effectiveness in helping education move forward."²

¹Roberta Bishop Freund, Open the Book (New York: Scarecrow Press Inc., 1962), pp. 22-23.

²Helen Heffernan, "The Library Improves the Elementary School," ALA Bulletin, LVI (February, 1962), 103.

II. PLANNING THE ELEMENTARY SCHOOL LIBRARY

In order to make the elementary school library functional as well as inviting and fascinating to the students, cooperative planning in terms of educational goals is essential. Kennon states that:

Good elementary school library programs don't develop overnight. They are dependent upon five supporting factors: budget, personnel, materials collection, quarters and equipment, and program planning by the school faculty.¹

These five supporting factors can be provided adequately only if cooperative planning which includes the board of education, superintendent, principal, librarian and teachers takes place.

The board of education has a major task in developing guidelines for the establishment and maintenance of a desirable educational program. It is essential, then, that they understand the role the elementary library plays in the education of children. Unless the board of education can see the importance of the elementary library it is doubtful that funds will be provided for its establishment or if it will be included in building plans.

The role of the superintendent is primarily that of leadership. It is his responsibility to make

¹Mary Frances Kennon, "Trends in Developing Elementary School Libraries", ALA Bulletin, LVI (February, 1962), 112.

recommendations to the board of education that are based upon study and experience. It is his task to interpret the educational program to the community. He must be able to organize human resources for the improvement of the educational program.

The principal must also provide leadership for the improvement of the instructional program. His most important task is to be informed about the needs of boys and girls. He must use this knowledge to build the educational program to meet these needs.

Teachers are in a position to know the needs of their students better than anyone else in the school system. Their contributions can be invaluable in planning the educational program for the students. Teachers who have kept up with educational trends are fully aware of the necessity of elementary library facilities. They are aware of the objectives of the school and of the activities that are associated with the school program. Because of this awareness, their suggestions regarding types of furniture, space arrangements, book collections, storage space, etc., should be given serious consideration when planning the elementary library.

¹National Council on Schoolhouse Construction, Guide for Planning School Plants (East Lansing: National Council on Schoolhouse Construction, 1964), p. 4.

The primary goal of school library development is the improvement of services to pupils and teachers. To accomplish this goal, planning will involve a complete study of the educational program including teaching methods, class size, curriculum development, and projection of future school needs. According to Kennon:

Specific feasible goals for school library development are needed to guide action. They help to focus attention on needs and gain support from persons who can help to meet the needs. Before goals can be adopted, it is usually necessary to survey existing library resources and services. After strengths and weaknesses are identified realistic goals can be set.¹

Enthusiastic school personnel can do a great deal to sell a community on the necessity of the elementary library or at least on the need of improved library services. When a definite need is established most obstacles can be overcome.

It appears quite obvious that a small collection of books in each classroom cannot give students the necessary library skills. There are, however, some overcrowded schools that will not have space available to centralize their libraries. These schools can increase the efficiency of their available resources by having all their books and other library materials listed in a centralized card catalog. In this

¹Mary Frances Kennon, "School Libraries", Wilson Library Bulletin, XXXIX (May, 1962), 775.

way members of the staff will know the items available throughout the school. The cards should give the room location of each book or piece of equipment.

Schools should start with the resources that they have available to them, whether it is an unused classroom or storage room or whether it is a library facility planned in a new school building. Jordon and Jackson suggest that:

Through cooperative efforts any well-lighted and properly ventilated room of sufficient size can become a library. Sometimes an adjacent cloakroom can become a workroom for the librarian and clerk and a storage space for materials. Movable furniture -- shelving, tables of varied shapes and heights, and filing and cataloging equipment -- can be purchased.¹

Once a school has decided to establish a centralized elementary school library, a planned program for its development should be initiated. In most cases a district will not provide funds to establish a complete library within one year. Gaver states that the school:

...can best achieve their aim by a step-by-step plan aimed at reaching reasonable standards in physical quarters, personnel, materials, and the resultant program of services -- not over-night -- but over a period of several years. It is desirable, however, in setting up such a long range plan that the goal be set within a five year period, otherwise a whole generation of school children will pass through a

¹Marion Jordon and David M. Jackson, "The Schools We Already Have," Elementary School Buildings...Design for Learning (Washington: National Education Association, Department of Elementary School Principals, 1959), p. 174.

school with little evidence of the new resources and facilities actually available in the school.¹

EDUCATIONAL SPECIFICATIONS

When consideration is given to construction of school plants it is important that educational specifications be submitted to the architect so that the building will fit the desired school program. Educational specifications are "a written communication from the owner to the architect, describing the educational activities, that the school plant should accommodate."²

The development of educational specifications for the elementary school library is a necessary part of the planning process. These specifications should convey to the architect an understanding of the types of services, uses, and the various needs of the school program. The specifications should provide the architect with information regarding the location, the number of people that will use the library, the activities that will take place, the special areas needed, and the various types of equipment to be housed.

¹Mary Virginia Gaver, *op. cit.*, p. 141.

²Dwayne E. Gardner, "Educational Specifications for the School Library," *ALA Bulletin*, LVIII (February, 1964), 114.

Too often educational specifications are over simplified by the use of such terms as adequate shelving or adequate storage. Certainly the needs of the library cannot be conveyed to the architect in such general statements. The architect needs more specific information such as: shelving for 2,000 regular elementary books or storage for 500 filmstrips, etc. No one is in a better position to know the needs of the school library than the school staff members. Unless these needs are conveyed to the architect in understandable terms, the school library will fall far short of its expectations.

The architectural responsibility lies within the realm of design, fabrication, structure, construction, and installation, not with the development of the educational program. Libraries that are not built around an educational program result in the program, of necessity, being built around the facilities available in the library.

Cameron states that the architect needs answers to certain basic questions when planning a new library:

- ✓ 1. How many items of printed materials of different types will need to be in the library?
- ✓ 2. How many and what types of audio-visual aids will need to be included in the planning?
3. What are the most efficient ways for the materials and audio-visual aids to be utilized?
4. How much and what type of preparation of materials is contemplated?

- ✓ 5. Should the plans incorporate facilities for the maintenance and repair of books, films, and the like?
6. What controls governing the operation of the library are contemplated?
- ✓ 7. Will a professional library for teachers and other staff members be a part of the school library?
8. Will there be departmental libraries in addition to the main library?
- ✓ 9. Will books, films, projectors, and so on be regularly disbursed from the library to the classrooms?
10. Will conferences with individuals or groups be held in connection with the library program?
11. Is it contemplated that audio-visual aids will be utilized in the library? If so, by individuals? groups? what size groups?
- ✓ 12. What is the maximum number of books that might be expected to be checked out in one day? returned in one day?
13. What activities in connection with the library program will require special acoustical treatment? special lighting treatment?
- ✓ 14. How many and what type of materials will be displayed?
- ✓ 15. How many full and part-time librarians will be available?
- ✓ 16. How many student assistants will be available, and what type of work will they perform?
- ✓ 17. What should be the capacity of the space devoted to each activity of the library at a given time?¹

¹John L. Cameron, "The School Library Program: What the Architect Needs to Know", Problems in Planning Library Facilities (Chicago: American Library Association, 1964), pp. 156-57.

Educational specifications are not intended to give advice on design because this places restrictions upon the work of the architect. However, there are some specifications necessary if the architect is to design the library to fit the instructional program. Benda lists some specific requirements to help the architect in planning the library:

1. Stacks to provide for a specified number of volumes. Shelves adjustable to accommodate over-size books. Stack heights up to 6 feet high along walls and 4 feet high when used as space dividers.
2. Rack space for magazines (slanted type shelving) for the number of issues currently received, and planned to include some growth in subscription. Rack space for newspapers designed for economical storage.
3. Storage for present recordings and a reasonable amount of growth, tape recordings in a cabinet, and filmstrips in a cabinet provided with drawer storage - to be added to as the collection grows.
4. Tables and chairs for the required percentage of users in the reading area, with not over 6 pupils per table. Table height to fit the user. (You may wish to recommend that one third of the tables be round or other than rectangular.)
5. Study carrels (based on the number required by your program). The carrels to be individual or in multiples, with partitions for privacy and a shelf for materials. Proper lighting and an electric outlet to be provided each carrel.
6. Informal seating in the browsing area to be home-like and invite participation and use.
7. Circulation desk to be placed at a focal point for good supervision. The design could be counter height, movable or sectional, perhaps of a circular shape, with a book return drop slot, built-in charging facilities with card files for books in circulation, and lockable money drawer. Storage shelves and drawers as needed.

8. Card catalog in five-drawer units. These units may be stacked as recommended, or set side by side with a countertop over them to serve for a ready reference work surface.

9. Four-drawer vertical files to be placed where best to provide the function they will serve.

10. A dictionary stand and an atlas stand located for best use.¹

Educational specifications that have been developed as a result of cooperative planning offer the greatest possibility of having functional library facilities.

LOCATION OF THE ELEMENTARY LIBRARY

A great deal of thought should be given to the location of the library within the school plant so that it will most effectively serve the instructional program. Nicholsen suggests that "it should be located as near the center of the school as possible so that it is accessible to all students and teachers".² Accessibility alone, however, is not the only consideration for the location of the library. The location should be considered in relation to the total school building and the total school program.

¹Charles A. Benda, "The School Library and the Architect", Problems in Planning Library Facilities (Chicago: American Library Association, 1964), pp. 153-54.

²Margaret E. Nicholsen, "The I.M.C." School Libraries, XIII (March, 1964), 42.

According to Elizabeth Hodges "the location of the library should be determined on the basis of accessibility, freedom from unnecessary noise, and possible future expansion".¹

Some factors that need to be given consideration regarding the location of the library would include:

(1) whether the library is to be open after school hours or during the summer. If it is to be open at times other than school hours, it would be most practical to have outside entrances directly to the library to avoid having the entire school facility open. (2) In elementary schools the higher grade levels will use the library more than the lower grades. If the library could not be centrally located for some reason, it would be more practical to have it closer to the higher grade levels. (3) The library should be located away from noise areas such as music rooms and cafeterias. (4) The library should have the ability to expand if necessary. "To allow for enlargement of the library as enrollments increase, or as curriculum changes make new materials and services necessary, the original quarters should not adjoin load-bearing walls, stairways, lavatories, or other fixed architectural features."²

¹Elizabeth Hodges, "Physical Requirements for Good Library Service", American School and University, 1961-62, (New York: Battenheim Publishing Corp, 1961) p. F-11.

²ibid.

SPACE REQUIREMENTS FOR THE LIBRARY

Space allocations for the various areas of the library are important if the library is to become an effective part of the school program and so that the library will serve in the process of self-education. Benda states that the objectives of library space are to:

(1) support the instructional program; (2) provide materials for personal needs; (3) provide for reference service and research; (4) serve the entire school; (5) provide needed services to implement the educational program; (6) serve the teachers as needs demand in preparation of subject matter and student motivation; (7) provide adequate materials, facilities, and services to meet the needs; (8) provide an atmosphere to encourage pupil participation and search for information and knowledge on their initiative; and (9) produce an atmosphere conducive to recreational reading.¹

When planning for the various areas in the library one must look at the current trends in education and at what will be expected of the library in the future. "Present space requirements are based on the assumption that the student will spend approximately one sixth of his time in the library."² However, some educational programs require much more time in the library for the students. This means

¹Charles J. Benda, "The School Library and the Architect", Problems in Planning Library Facilities, (Chicago: American Library Association, 1964), p. 153.

²Mrs. Georgia Rankin Cole, "The Departmentalized School Library", Problems in Planning Library Facilities (Chicago: American Library Association, 1964), p. 166.

that more and more people will be in the library at any given time and that more and different types of seating arrangements will be needed. Part of the seating will probably be in the form of carrels.

There is little question that the libraries of the future will become larger because of the materials that they will house and the activities that will take place in the library. Materials that will be housed in the library include books, filmstrips, maps, motion pictures, pamphlets, periodicals, records, slides, tapes, and all of the equipment necessary to use these various materials.

Lohrer suggests that elementary schools with enrollments of 300 or more pupils include areas that contain:

- (1) a minimum, essential space for reading, viewing, and listening activities by individuals or groups;
- (2) space for exhibits; (3) space for office, work, and conference needs; (4) space for the production of materials; (5) storage and stack space for school-owned printed and nonprinted learning resources and for equipment that is rented or borrowed; and (6) space¹ for professional resources and work needs of teachers.

Reading Room Space. The reading room will require the greatest allocation of space in the library facility. In order to adequately determine the size of this area, the current and the anticipated enrollment of the school must

¹Alice Lohrer, "The Elementary School Library Planned as an Instructional Materials Center", Problems in Planning Library Facilities (Chicago: American Library Association, 1954), p. 177.

be taken into consideration. In the literature, space allocations are based upon the intended seating capacity of the room. Therefore, it must first be determined how many students the library will need to seat at one time.

The California Elementary School Administrators Association suggests that the reading room should seat the "largest class plus ten."¹ The American Library Association Standards call for "a seating capacity of 10 per cent of the enrollment in schools with more than 550 students and a minimum seating capacity of 45-55 students in schools having 200-550 students."²

Based upon the necessary seating capacity the California Elementary School Administrators feel that 25-30 square feet per seated student is required with a minimum of 1200 square feet.³ The American Library Association states that "30-35 square feet per reader" are necessary.⁴ This includes the space necessary for the shelving, tables, and aisles that need to be in the reading room.

¹California Elementary School Administrators Association, Instructional Supplies and Equipment for the Library of the Good Elementary School (San Francisco: California Elementary School Administrators Association, 1957), p. 15.

²American Library Association, op. cit., p. 119.

³California Elementary School Administrators Association, op. cit., p. 15.

⁴American Library Association, op. cit., p. 120.

Work and Storage Room. If the workroom and storage room are combined and serve as storage for both printed and audio-visual equipment and materials, about 400 square feet of floor space are needed.¹ It is desirable that there be 10x12 feet of clear work space.² The partition between the reading room and the work-storage room should have glass panels so that the activities in the reading room can be observed. In many cases the librarian's office is also included in the work-storage room.

Conference Room. Libraries in schools with less than 1,000 students should have at least one conference room. This room should be connected with the main reading room. Glass panels installed in the partition between the reading room will facilitate supervision. There should be a minimum of 120 square feet of space in the conference room.³ This room will be used by both teachers and students for meetings and other small group activities.

Viewing and Listening Areas. Most authorities agree that there should be listening and viewing areas in the library. In larger schools with enrollments over 500

¹Ibid.

²California Elementary School Administrators Association, op. cit., p. 15.

³American Library Association, op. cit., p. 121.

students separate listening and viewing rooms could be provided. In schools with smaller enrollments it would probably be more practical to incorporate these areas into the reading, conference, or workroom. They could be provided in the reading room through the use of carrels that have electrical outlets and are equipped with headsets. The workroom and conference room can be equipped with sufficient outlets and furniture to perform this service in a satisfactory manner.

FURNITURE

Furniture used in the elementary library should be functional, durable and attractive. It is usually desirable to avoid dark finishes because they reveal scratches and dust easily. Dark finishes also absorb a considerable amount of light. Finishes should be dull rather than shiny to avoid glare.

If possible, furniture with glued joints should not be placed near the heating units because of the damage that will occur from the heat coming directly from the units.

Reading Room Furniture -- Shelving. The amount of shelving used in the elementary library will be determined by the size of the collection of materials that the school has. The National Council on Schoolhouse Construction states

that there should be allowed "1 linear foot of shelving for 15 elementary books."¹ The American Library Association estimates the number of books per three-foot shelf when full as: "Books of average size - 30; reference books - 18; picture books (with dividers) - 60."² It is not recommended by most authorities, however, to have full shelves because of the wear that accompanies crowded books and because of the difficulty elementary students will have in working with full shelves. It would be better to fill shelves approximately three-fourths full. According to Hodges:

Any school which hopes to meet national standards must provide shelving for a minimum of ten books per pupil. By estimating ten books per linear foot of shelving, this means that there must be one foot of shelving for each pupil, plus the amount of shelving needed for anticipated expansion. This estimate is based upon full shelves, a condition extremely difficult to administer. Therefore, a really adequate shelving estimate would require an increase of 10-25 percent over the minimum.³

The height of the various types of shelving in the elementary library should be in proportion to the size of the students that will use them. The National Council on Schoolhouse Construction suggests that:

All shelving should be adjustable. The height of the shelving for the regular collection should be 5 feet.

¹National Council on Schoolhouse Construction, Guide for Planning School Plants (East Lansing: National Council on Schoolhouse Construction, 1958), p. 58.

²American Library Association, op. cit., p. 126.

³Elizabeth Hodges, op. cit., p. F-25.

The height of the picture book shelving should be from 36 inches to 40 inches, with a depth of 12 inches and four dividers for each 3 feet of shelving.¹

The American Library Association's specifications for regular shelving include:

Width of section on centers.	3 feet
Depth of shelves	
Standard	8-10 inches
Oversize	10-12 inches
Thickness of shelves	13/16 inch
Base	4-6 inches
Total height of standard section	5-6 feet
Total height of counter section	30-42 inches

Specifications for special shelving:

For current periodicals	
Depth of slanting shelves	16 inches
Depth of shelves straight across	12 inches
For back issues of periodicals -- depth	12-15 inches
For picture books for elementary schools	
Depth of shelves	12 inches
Space (in the clear) between shelves	14-16 inches
1/4 inch upright partitions approximately	7-8 inches apart in each section.
For phonograph records	
Depth of shelves	16 inches
Space (in clear) between shelves for average size records	14 inches
Space (in clear) between shelves for oversize records and transcriptions	18 inches
1/4 inch upright removable partitions approximately 2 1/2 inches apart in each section. ¹	

As much of the shelving as possible should be against the wall. Shelving that cannot be against the wall should

¹National Council on Schoolhouse Construction, Guide for Planning School Plants, 1958, op. cit., p. 58.

²American Library Association, op. cit., p. 125-26.

be so arranged that it does not interfere with the flow of traffic within the room. Excessive trim on shelving units should be avoided because it decreases the capacity of the shelving.

Tables and Chairs. The size of the tables used in the elementary library should be such that they will serve the varying sizes of the students that will use them. Tables should be of different sizes and shapes. A variety of table shapes will increase the flexibility of the tables and will create a more informal atmosphere in the library. These tables should have a light finish to provide a light background for the readers. Dimensions of the tables will be "height 25-28 inches; width 3 feet; length 5-6 feet; round tables 4 feet. A minimum of thirty inches per reader is allowed in table lengths."¹

Some factors that are important in determining proper seating are:

1. Seat height should be such that the pupil's feet may rest flat on the floor and support sufficient weight to relieve pressure on the underside of the thigh at the front of the seat.
2. If the pupil's back is properly supported by the backrest there should be three or four inches clearance between the front edge of the seat and the inside angle of the knee.
3. The seat should slope slightly down toward the rear in order to overcome the tendency to slide forward, and it should touch only the lumbar region or

¹American Library Association, op. cit., p. 126.

hollow of the back between the hips and the shoulder blades. Self-adjusting back supports are desirable. 4. The height of a flat desk top should be about one inch above the elbow level of the pupil when he is properly seated and holds his upper arm in a vertical position.¹

Chairs to be used with the tables will need to be from 14 to 17 inches in height. Enough chairs should also be provided to accommodate the students during the story hour. These should be stacking chairs that can be removed from the floor when not in use to provide more floor space in the library.

Carrels. Individual carrels seem to be becoming an important part of the elementary library. This is due primarily to the emphasis upon individual study. Small areas and carrels planned for reference work or group projects are more meaningful in the elementary school library program than are conference rooms.² Trump recommends one carrel for every three students in the school.³

Several types of carrels are available on the market today. Some are individual units to seat only one person while others are regular tables with partitions set

¹National Council on Schoolhouse Construction, Elementary School Plant Planning (Nashville: National Council on Schoolhouse Construction, 1958), p. 16.

²Lehrer, op. cit., p. 180.

³J. Lloyd Trump, "Images of the Future for School Libraries", ALA Bulletin, LV (February, 1961), 129-31.

across the top forming divisions of four or six areas.

Most authorities agree that the elementary library should be equipped with carrels, however, the type and number needed can only be determined by the type of educational program of the school. As school programs provide for more independent study the number of carrels will increase. It is advisable that they be equipped with electrical outlets and headsets for viewing and listening activities.

Other Reading Room Furniture. Other items of furniture that are essential in the reading room are: (1) the card catalog with a maximum height of 45 inches, allowing 4 standard drawers per 1000 books;¹ (2) a charging desk 32 inches high, 72 inches long by 28 inches wide;² (3) two book trucks -- one to be used in the library and one for moving books to the classrooms; (4) atlas stand; (5) bulletin boards at eye level for the students; (6) display cases; (7) vertical files; and (8) dictionary stand.

Work-storage Room Furniture. Some authorities believe that the work-storage area should be planned in connection with the teachers workroom or the office duplicating area. Lohrer states that "facilities and equipment

¹National Council on Schoolhouse Construction, Elementary School Plant Planning, op. cit., p. 27.

²Ibid.

that can be used interchangeably by faculty and staff reduce costs and result in more efficient equipment utilization."¹ If this is done, however, it is still necessary that the room adjoin the library so that the library can be supervised from the workroom. The equipment presented as necessary in this section refers only to that which should be provided for the library work-storage room and not to a staff workroom.

A very important piece of furniture for the workroom will be a counter covered with a water-resistant surface such as Formica. It should have built in a sink with hot and cold water. The height of the counter should be 36 inches with a depth of 24 to 30 inches. The counter will be most effective if it has both drawer and door space to accommodate different types of materials. The cabinet below the sink should be closed. Kneehole space should be provided in the counter for at least two people to sit comfortably while working. Above the counter there may be either open shelving or cupboards for storage of supplies and small equipment.

The workroom should be provided with an area where spray painting, lacquering, etc., can be done. There should be an exhaust fan over this area to remove the odors and fumes.

¹Lohrer, op. cit., p. 181.

Shelving to meet the specifications cited in the reading room furniture section must be provided in the work-storage room. Shelving for the workroom will need to be a "minimum of 250 feet."¹ This shelving is used for current newspapers, back issues of periodicals, and equipment stored in the workroom.

To determine the amount of storage space for audio-visual materials and equipment the school needs to take inventory of the kinds, sizes, and numbers of this equipment and materials. The inventory plus the anticipated increase in these items will determine the amount and kind of storage required.

Storage for the audio-visual equipment will include space for overhead and opaque projectors, sound and film-strip projectors, phonographs, radios, televisions, films, filmstrips, maps, posters, and records. Space is also needed for projection bulbs and other repair and replacement supplies.

When the librarian's office is to be included in the work-storage room, a desk and typewriter stand will be necessary. These could be built in the form of a counter with a height of 30 inches for the desk area and 26 inches for the typing area. Drawer space could be provided on both sides of the knee-hole according to the needs of the

¹California Elementary School Administrators Association, op. cit., p. 17.

librarian. The librarian will need to have at least one legal size file in her office area so that materials can be properly filed for future use.

If the work-storage room is to serve as a viewing and listening area additional tables and chairs will need to be provided for this purpose.

Conference Room Furniture. The conference room usually contains one long table, chairs for 8 or 10 persons, a small chalkboard, a bulletin board, and one standard unit of shelving.¹ If the room is to serve as part or all of the listening and viewing area it will need to be equipped with electrical outlets and a projection screen. Space is also needed to set the equipment upon that will be used in the room. The room will need adequate sound controls for using audio-visual equipment.

FLOOR COVERING

Factors to be considered in the selection of floor covering for the library would include sound absorbing qualities, initial cost, maintenance, appearance, and durability. It appears that no one type of flooring is superior to all others when these various factors are taken

¹J. L. Taylor, Library Facilities for Elementary and Secondary Schools, Office of Education circular 15050, (Washington: Government Printing Office, 1965), p. 21.

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into consideration. The Educational Facilities Laboratories comments that "flooring offers perhaps the clearest and easiest to understand case study of low cost and high maintenance versus high initial cost and low maintenance."¹

Arguments for resilient types of flooring as well as arguments for carpeting can be found in the literature. Either type of floor covering has some advantages over the other.

In an experiment at Shaker High School in Newtonville, New York, underwritten by the American Carpet Institute, one-half of a new school was carpeted while the other half was covered with asphalt tile:

For the past three years now, this carpeting has been subjected to strict observation and tests. To date, it has cost \$176.61 a year to maintain every 1,000 square feet of carpet. It has cost almost twice as much, \$350.75, to maintain every 1,000 square feet of tile. What's more, it took about half the time -- 34 compared to 64 minutes a day -- to maintain the carpeting. School officials estimate that the carpeting's acoustic qualities have reduced the noise level at Shaker High School by 50 per cent.²

Another study was conducted at Andrews, Texas, in which one school with carpeting was compared with a similar

¹Educational Facilities Laboratories, The Cost of a Schoolhouse (New York: Educational Facilities Laboratories, 1960), p. 101.

²Educational Facilities Laboratories, High Schools, 1962 (New York: Educational Facilities Laboratories, 1961), p. 73.

school with vinyl tile flooring. The carpet:

...cost \$2,000 to install. Vinyl tile in a similar school cost \$1,120. Based on three years maintenance, a projected nine-year cost sequence showed that the town will not only make up that \$880 initial difference but save an additional \$1,207¹ or about half of the carpet's total initial cost.¹

Basically the proponents of carpeting present the following factors in its favor: (1) although carpeting costs more initially this cost will be offset by decreased maintenance costs; (2) carpeting is highly effective in the reduction of noise within the library; (3) carpeting helps to create a pleasant atmosphere in the library; (4) carpeting reduces the possibility of accidents and is more comfortable to walk on; and (5) students behavior improves because of the psychological effect of carpeting.

Tile flooring materials vary considerably in the factors that are thought essential for the library. Tables I and II illustrate some of these variations that exist in resilient flooring materials.

Perhaps the greatest advantage of tile flooring is the low initial cost of installation. Other arguments for tile floors are: (1) flexibility in design; (2) their ability to be kept sanitary and dust-free; (3) durability; and (4) low maintenance costs.

¹Ibid.

TABLE I

CHARACTERISTICS OF RESILIENT TILE FLOORS¹
(Armstrong Cork Co.)

	INSTALLED COST PER SQ. FOOT	RESILIENCE	DURABILITY	STAIN RESISTANCE	EASE OF MAINTENANCE
<u>SHEET FLOORS</u>					
Vinyl Corlon	\$.70-1.15	4	2	1	2
Linoleum	.45-.55	4	3	4	3
<u>TILE FLOORS</u>					
Vinyl Corlon	2.30-3.60	5	1	1	2
Vistelle Corlon	1.90-2.00	1	1	1	2
Custom Vinyl Cork	1.75-1.85	3	4	1	1
Custom Corlon	.80-1.15	2	1	1	2
Linotile	.75-.80	5	1	2	1
Standard Cork	.60-.95	1	5	5	5
Rubber	.60-.70	2	2	2	3
Excelon	.35-.40	6	2	4	2
Asphalt	.15-.30	7	3	5	4

The figure 1 represents top performance; the figure 5, relatively poor performance.

¹George F. Johnston, "Resilient Flooring Materials in Libraries",
The Library Environment (Chicago: American Library Association, 1965), p. 61.

TABLE II

A FLOORING PERFORMANCE OBSERVATION BASED ON
24 YEARS OF FLOOR CONTRACTING EXPERIENCE
(Hercules Flooring Co.)

	Asphalt Tile	Vinyl Asbestos Tile	Linoleum Tile	Cork Tile	Solid Vinyl Tile	Rubber Tile	Linoleum
Adaptability on Grade	E	E	P	P	P	-	-
Adaptability below Grade	E	E	P	E	E	-	-
Safety Underfoot	P	E	G	P	P	G	P
Cleanability	P	E	G	P	E	P	P
Light Reflectance	P	E	P	P	E	P	P
Greaseproofness	P	E	G	P	E	P	P
Quietness	P	G	G	P	E	E	G
Maintenance Cost	P	E	P	P	P	P	P
Installation Cost	E	P	P	P	P	P	P
Colors	P	E	P	P	E	G	P
Fungicidal	P	E	G	P	E	P	P
Curling	P	E	P	P	P	P	P
Installed Cost per Sq. Ft.	.33	.50	.69	.94	.94	.69	.69
P - Poor	F - Fair	G - Good	E - Excellent				

The installation costs per square foot used in this chart are actual Ohio averages.

David A. Pierce, Saving Dollars in Building Schools (New York: Reinhold Publishing Corporation, 1959), p. 57.

Maintenance costs of different types of floor coverings are difficult to establish. One must take into consideration how often the floors would be swept, mopped, waxed, vacuumed, or shampooed, and the amount of labor that would be required for each activity. The life of the material is also an important consideration because of necessary replacement costs.

Regardless of the type of flooring used it is important that it has sound reducing characteristics. It is also necessary that the flooring conform to acceptable light reflection standards.

ENVIRONMENTAL CONTROL

Realizing the effect that the environment within the library will have upon its users, careful planning will create surroundings that are conducive to the learning processes of the library. The usefulness of the library is greatly dependent upon the control of light, temperature, sound, aesthetic appeal, and space.

Visual Environment. In the literature of just a few years ago the footcandle was the determining factor of acceptable lighting. Today, however, authorities take into consideration other factors as well as the footcandle intensity of light. They are concerned with achieving a balance between intensity and brightness. Terry states that

satisfactory school lighting must meet these requirements:

1. Be within the normal limits of brightness or intensity on the working area.
2. Maintain the contrast between the light on the book or desk and that in the surrounding aisle or floor area within satisfactory limits.
3. Control the light to prevent disturbing shadows or reflections.¹

Two important factors in achieving balanced brightness within a room are the amount of glare and the brightness contrast within the visual field. "Brightness contrast, if greater than a ratio of 1 to 10, can cause eye strain due to the instinctive attempt of the eye muscle to adjust to both levels."² Excessive brightness contrast usually results from conditions such as:

1. The actual source of a bright light being visible.
2. The surfaces in the visual area being smooth or reflective enough to mirror the brightness of the source.
3. The degree to which the source is a point of light rather than a diffused light so that shadows cast by the light are in sharp contrast to the visual surround.³

Disturbing brightness contrasts can be avoided or minimized by having the light source high enough to be out of the field of vision; by avoiding furniture or other

¹Harry Terry, Mechanical-Electrical Equipment Handbook for School Buildings (New York: John Wiley & Sons, 1960), p. 310.

²Brook Arms, "Principles of Illumination for Libraries", The Library Environment -- Aspects of Interior Planning (Chicago: American Library Association, 1965), p. 32.

³Ibid.

surfaces with glossy finishes; and by covering greater areas of the ceiling with light that is properly diffused.

Table III gives examples of the lighting requirements of various tasks in the library. The number 2 pencil task is comparable to most activities that occur in the library. The type of lighting that the table is based upon is comparable to the type of lighting created by totally indirect, diffuse lighting.

TABLE III
LIGHTING REQUIREMENTS FOR SAMPLE LIBRARY TASKS
Based on 1959 Standards for "Glare-free Light"¹

Task Description	Required Footcandles
10-point Texttype print	0.9
8-point Texttype print	1.1
Ink writing on white paper	1.4
12 easiest spirit-duplicated samples	2.1
Printed numerals	8.3
No. 2 pencil on white paper	63.0
No. 3 pencil on white paper	76.5
5th carbon copy of typed material	133.0
12 most difficult spirit-duplicated samples	141.0

If provisions are made for a balanced brightness and for the reduction of glare, improvement of visual tasks

¹H. Richard Blackwell, "Lighting the Library -- Standards for Illumination," The Library Environment -- Aspects of Interior Planning (Chicago: American Library Association, 1965), p. 24.

will rise at a rather constant rate up to 150 footcandles. Only tasks involving minute details require footcandle levels over 150. This type of task does not normally occur in the elementary library.

Appropriate levels of lighting and brightness balance can be achieved with many different types of lighting systems.

According to Arms:

The decision of what lighting to use in a library should be based not upon whether the source is fluorescent, incandescent, polarized, or any other type of arbitrarily high level lighting, but rather upon the comfort that can be obtained without confusing brightness contrasts or glare.¹

The National Council on Schoolhouse Construction states the following recommendations for lighting:

1. In a classroom, the brightness of any surface viewed from any normal standing or sitting position should not be excessively greater than the brightness of the visual task. As the high brightness of surface in the visual field approaches the brightness of the task, visual comfort and efficiency increase. Present research indicates that the highest acceptable brightness of any surface in the visual field should not be greater than ten times the brightness of the task.
2. In a classroom, the brightness of a surface viewed from any normal standing or sitting position should not be excessively lower than the brightness of the visual task. As the brightness of surfaces in the visual field approaches the brightness of the task, visual comfort and efficiency increase. Present research indicates that the lowest acceptable brightness of any surface in the visual should not be less than one-third the brightness of the task.

¹Arms, *op. cit.*, p. 33.

3. The brightness of surfaces immediately adjacent to the visual task is more critical in terms of visual comfort and efficiency than that of more remote surfaces in the visual field. These adjacent surfaces have lower acceptable brightness limits than surfaces farther removed from the task. Present research indicates that surfaces immediately adjacent to the visual task should not exceed the brightness of the task and should be at least one-third the brightness of the task.

4. The brightness-difference between adjacent surfaces in the total visual field should be reduced to an acceptable minimum.

5. The characteristics of any lighting system should be such that direct and reflected glare are not objectionable. If the brightness-difference produced by a lighting system are held within the limits stated in recommendations 1, 2, and 3 above, direct and reflected glare will not be objectionable.

6. Daylight and electric light systems should conform to the same recommendations for brightness and brightness-difference standards, and both systems should be coordinated in design to assure the effective contribution of both.

7. Any lighting system should be designed in such a manner that it will contribute to a cheerful, friendly, and aesthetically pleasing classroom environment.¹

Colors used in the library are based upon their ability to create a pleasant atmosphere in keeping with standards for appropriate lighting. Colors within the field of vision should be selected so that they are within the brightness contrast ratio of 1 to 10 and do not produce unwanted glare. Table IV gives the desirable range of reflectance of the various surfaces to be found in the library.

¹National Council on Schoolhouse Construction, Guide for Planning School Plants, 1964, op. cit., pp. 129-30.

TABLE IV

RECOMMENDED SURFACE REFLECTANCES FOR SCHOOLS¹

Ceilings	70-90%
Walls	40-60%
Chalkboards	up to 20%
Desk	35-50%
Floor	30-50%

The National Council on Schoolhouse Construction

suggests the following factors to consider in color selection:

1. Light colors reflect more light than dark ones.
2. Too much brightness may handicap vision by creating glare, by providing a disturbing tendency to pull away from the task or by unduly constricting the pupil-opening of the eye itself.
3. The brightness ratios in the room coming in the general field of vision of the pupil such as the walls, floors, or furniture should be fairly uniform.
4. The walls should be painted in colors that reflect 50 to 60 percent. Ceilings should be finished with an 85 percent reflection factor flat white paint. Paint finishes should be flat or matte on all interior surfaces at eye level and above.
5. Emotionally, the red end of the spectrum is exciting while the blue is subduing. Consequently, red colors tend to increase bodily tension while green and blue colors tend to release tension.²

Thermal Environment. No doubt the heating system used in the library will be of the same type as that for the

¹National Council on Schoolhouse Construction, Guide for Planning School Plants, 1964, op. cit., p. 126.

²National Council on Schoolhouse Construction, Elementary School Plant Planning, op. cit., pp. 14-15.

entire building. Variations, however, usually exist with types of ventilation found throughout the school. The heating and ventilating systems are provided for the purpose of:

1. The supplying of heat for warm-up and to balance heat losses from the room to the outside.
2. The supplying of tempered air for the removal of excess heat.
3. The dilution and removal of unpleasant body odors by ventilation.
4. In special cases, the removal of injurious or obnoxious gases, vapors, fumes, and dust by the introduction of outside air or by filtration.¹

Heating is not done to supply heat to the human body.

It is to prevent a greater loss of heat from the body than about 400 Btu per hour.² A temperature of 74°F at 30% humidity gives an atmosphere pleasant to the largest number of people when the building is heated with systems other than radiant heating. A temperature of 70°F. is comparable to this with radiant heating.³

Types of ventilating systems range from open windows to various types of gravity or mechanical installations. Whatever type is used it is necessary that changes of air

¹Ibid., p. 66.

²Terry, op. cit., p. 1.

³Ibid., p. 3.

within the room are accomplished and that drafts are eliminated as much as possible. Six to eight air changes per hour are usually essential.¹ If open windows are used as the method of obtaining ventilation it is also necessary to have some type of exhaust to obtain proper air movement. Draft deflectors or other provisions are important to direct the air flow so that drafts are eliminated.

An exhaust fan should be provided in the workroom to remove the odors of lacquering, painting, and other fumes created with workroom activities.

Some new schools are now being equipped with air conditioning. This would seem most desirable in the library especially if the educational program were continued throughout the summer months.

Sonic Environment. Some forms of acoustical treatment for the elementary library are usually essential. The amount and types of treatment will vary depending upon the noise level created within the library and in the surrounding area. One of the first considerations in sound control for the library is to locate it away from the noisy areas of the school such as the music room or cafeteria.

Basically three sources of sound are considered in

¹National Council on Schoolhouse Construction, Elementary School Plant Planning, op. cit., p. 68.

the acoustical treatment of the library: (1) "air-borne sound originating within the room; ... (2) air-borne sound originating outside of a room; ... and (3) solid-borne sounds."¹ The first type of sound usually comes from sources such as sliding chairs, walking, dropping books, talking, and the reverberation of these sounds within the room. This type of sound can be controlled with materials used on the ceiling, walls, and floors.

A variety of acoustical ceiling tile is available which can be successfully used for treatment of the library ceiling. Reverberation from the walls can be decreased by using drapes on the windows or with properly spaced room dividers. The effectiveness of various types of floor covering, as an acoustical agent, are treated in a separate section of this chapter in the discussion on flooring.

Sounds that come from outside of the library can be reduced considerably by using sound insulating materials between the walls of the library. Hallways outside of the library should be made as acoustically dead as possible to absorb the sound near its source. Duct-work should be treated so that sounds will not travel from other rooms to the library.

¹David A. Pierce, Saving Dollars in Building Schools (New York: Reinhold Publishing Corporation, 1959), p. 58.

Some sounds travel through the structure of the building itself, usually along walls or floor slabs. Some of these sounds can be reduced by accoustical floor covering or expansion joints in the walls. They may also be minimized by mounting motors, etc., on rubber, springs, or other resilient materials.

Aesthetic Considerations. The effects that a pleasant environment have upon the growth and development of students is reason enough to plan the library in a pleasing and attractive manner. The atmosphere must not be too far removed from that of the home if it is to contribute to a relaxed learning experience for the child.¹

A strict adherence to the various reflection standards will result in light colored surfaces throughout the library. However, the library can use bright primary colors for accent such as in wall decorations, drapes, murals, paintings, etc. There is no doubt that the bright primary colors are the greatest favorites of younger children, however, as the students become older more accents will be appreciated. This is especially true of the teachers and librarians that will spend a good deal of time in the library.

¹J.L. Taylor, op. cit., p. 38.

Pupils need attractive surroundings in which to grow and develop. Aesthetic appeal can be created by the harmonious organization of space in terms of simplicity, proper relationships, proportions, and unity within the elementary library.

III. SUMMARY

The elementary school library can no longer be considered as a separate entity, but must be thought of as an integral part of the educational program that it serves. Leading educational authorities today express the opinion that all elementary schools need to have centralized library facilities. This need increases considerably as schools include more independent study in their curriculum and students are required to possess more self-education skills.

Current research indicates that centralized elementary library facilities are the most effective method of providing library services to students. Because of the efficiency with which materials can be provided, there will be increased utilization of the materials by both students and teachers. With improved library facilities teachers and librarians can work together to give children the full benefit of the library resources.

Financially, centralization of library resources will not save money. However, by spending the same amount

of money that would be spent on individual book collections, a school can obtain much greater effectiveness and utilization of library resources.

The responsibility for providing library services in the school lies with the board of education. Their obligation is to provide funds for the initiation as well as for the maintenance of a good library program.

Planning for the elementary library requires the involvement of the entire staff, not only to point out its advantages but also to get it effectively into operation. Whether the library is to be established in existing facilities or whether it is included in a new school plant, all phases of its development need to be planned in terms of the educational program. Elementary library facilities must also be made flexible enough to accommodate changes and new emphases within the curriculum.

Every school can work toward an effective elementary library. In overcrowded schools where no facilities exist, a beginning can be made by having a central card catalog available which has all elementary library materials included. Schools that can make space available should begin with what they have. This might be an empty classroom or other room that can be put to use as a library. Schools that are planning the construction of new plants need to make certain that an elementary library is included.

Educational specifications are a necessity in developing effective library facilities. These specifications should be the result of cooperative planning between the board of education, superintendent, principal, librarian, and teachers.

Educational specifications should provide the architect with information about the following:

1. Desired location of the library within the building.
2. Space requirements for reading, listening, viewing, conference, production of materials, storage, and office.
3. Furniture requirements including shelving, tables, chairs, carrels, card catalog, charging desk, book trucks, counters, office desk, sink, atlas and dictionary stands, bulletin boards, display cases, occasional furniture, and files.
4. Floor covering such as wood, tile (type), carpet.
5. Lighting to avoid sharp contrasts and glare; switches and outlets out of the way of shelving.
6. Ventilation including exhaust fans.
7. Heating - units placed to avoid direct contact with furniture.
8. Accoustical treatment of ceiling, walls, and floor.
9. Aesthetics - to create a home-like environment.

Educational specifications must be written in language that will be understood by the architect. Unless these specifications convey an understanding of the desired purpose of the library it will not become a functional part of the school program.

CHAPTER III

CHARACTERISTICS OF ELEMENTARY LIBRARY FACILITIES IN NEBRASKA SCHOOLS

During the course of this study a total of seventy schools were contacted either by personal visits or by personal interviews with the superintendent, principal, or librarian. The schools were contacted for three purposes: (1) to determine what provisions have been made for library services in those schools without centralized elementary libraries; (2) to find out if appropriate space of sufficient size would be available in schools without centralized libraries to establish this type of library; and (3) to determine the space and facilities available in existing centralized elementary libraries.

I. SCHOOLS WITHOUT CENTRALIZED LIBRARIES

Fifty school systems whose educational programs included kindergarten and grades one through twelve were contacted to find out how their library materials were organized and administered. Of these fifty schools, two were "Class AA" accredited by the Nebraska State Department of Education and had enrollments of 804 and 961 in elementary. Thirty-two of the elementary schools were "Class A" accredited with enrollments ranging from 43 to 739. The other sixteen elementary schools were "Minor" accredited

with the enrollments ranging from 45 to 210. North Central accreditation was also held by fourteen of the fifty schools..

None of these fifty schools contacted had a centralized elementary library. Their library books were dispersed throughout the school in individual classroom collections. The books in these collections were not classified according to the Dewey Decimal System, nor was there a central card catalog of the elementary books available in the school. The fact that there was no central card catalog seemed to limit the use of the books to the classrooms in which they were housed because they were seldom used by teachers or students in any other rooms. Other library materials such as filmstrips, maps, charts, models, records, etc., were also dispersed throughout the school. Audio-visual equipment was usually stored in the supply room of these schools.

Space was not available in any of the schools to establish a complete center for materials. Seven of them, however, did have space that could possibly be used for a reading room and to begin the centralization of the library book collections. The rest of the schools did not have an extra room that could be used even to begin a reading room.

Two schools plan to begin the centralization of library facilities within the next year. The plans for one of these is to include the elementary library with the high

school library. The other school will use a room which was originally part of a small gymnasium. Both of the schools have elementary enrollments of about 175. One is "Class A" and "North Central" accredited and the other is "Minor" accredited at the present time.

III. ELEMENTARY SCHOOLS WITH CENTRALIZED LIBRARIES

Twenty elementary schools with centralized libraries were visited to determine the characteristics of existing library facilities. Because centralized libraries were not found in the smaller schools previously described, it was necessary to visit the libraries in somewhat larger school systems. All of the twenty schools visited were part of a system that included two or more elementary attendance units.

As indicated in Table V all of the schools with central libraries were in systems accredited by the Nebraska State Department of Education. Thirteen were "AA" accredited and seven were "A" accredited. All of the schools were in systems accredited by the North Central Accrediting Association.

Student enrollment of the elementary schools ranged from 120 to 740. The number of teachers indicated in Table V includes all faculty members of the school except the non-teaching principals.

TABLE V

SIZE AND ACCREDITATION OF SCHOOLS VISITED

Elementary School No.**	1965-66 Enrollment	No. of Teachers	Grades Included	System Accreditation
1	450	16	K-6	AA*
2	360	14	K-6	AA*
3	120	4	1-4	A*
4	492	17	K-6	AA*
5	175	7	K-6	A*
6	270	12	K-6	AA*
7	600	26	K-6	AA*
8	670	20	K-6	AA*
9	365	14	K-8	A*
10	230	10	K-6	AA*
11	225	10	K-6	A*
12	540	20	K-6	AA*
13	330	12	K-6	AA*
14	300	12	K-6	AA*
15	740	26	K-6	AA*
16	370	14	K-6	AA*
17	300	11	K-6	AA*
18	352	12	K-6	A*
19	550	19	K-6	A*
20	284	14	K-8	A*

* Indicates North Central accreditation.

** Schools are listed according to date built.

The library in school number 7 given in Table V serves two separate elementary schools within the city. All library books are housed in the one library and the students from the other school are brought to the library at regularly scheduled times with school buses.

The evidence indicates that not until recently has the elementary library been included in the original plans of a school building in Nebraska. Table VI shows that those schools which were built after 1952 included provisions for centralized elementary library facilities. Those built prior to that time did not have plans for such purposes. Usually a room that had previously been used as a classroom was converted into the library in the older schools.

The method of converting previous classrooms or offices into libraries simply meant the addition of shelving for books. Complete renovation of the rooms was not undertaken with the exception of the library in school number 4. In this school a classroom and a restroom were converted into a library. A wall was removed between the classroom and the restroom and all restroom facilities were taken out. Blackboards and ledges were removed so that the book shelving would fit against the walls.

TABLE VI

ORIGIN OF SPACE FOR THE LIBRARY

Elementary School No.	Year Built	Library Included in Building Plans	Room Used Previously As
1	1898	No	Classroom
2	1911	No	Multi-purpose
3	1914	No	Classroom
4	1914	No	Classroom and Restroom
5	1914	No	Classroom
6	1925	No	Music
7	1925	No	Classroom
8	1926	No	Office
9	1927	No	Office
10	1934	No	Classroom
11	1935	No	Classroom
12	1941	No	Storage
13	1952	Yes	
14	1952	Yes	
15	1955	Yes	
16	1958	Yes	
17	1960*	Yes	
18	1963	Yes	
19	1964	Yes	
20	1965*	Yes	

* Indicates year addition was built containing library.

LOCATION OF THE LIBRARIES WITHIN THE ELEMENTARY SCHOOLS

Elementary schools built since 1952 were all one-story structures and, therefore, the libraries were at ground level. It was this group of schools that had included the centralized library in their original building plans. The libraries were located near the center of the building with entrances from the main arteries of traffic. Classrooms housing students in grades five and six were located closest to the library in all but two of these newer schools.

The older school buildings that did not have libraries provided in the original structure contained from one to five different floor levels as indicated by Table VII. The location of the library in these schools was determined by the location of a room that could be made available for library purposes. In all but three cases a room with a relatively central location, near the main flow of traffic, was obtained for the library

AVAILABLE SPACE FOR THE LIBRARY

Considerable variations exist in the size of rooms housing the elementary library in the schools visited. Table VIII indicates that these rooms range in size from a total of 100 square feet to 1,440 square feet of floor space. This includes the space used for shelving and other

TABLE VII

LOCATION OF THE LIBRARY IN BUILDING

Elementary School No.	Floors in Building	Floor of Library	Near Center of Building	Nearest Grades
1	3	2	Yes	5-6
2	3	1	No	1-2
3	2	2	Yes	3-4
4	2	1	Yes	1-2
5	2	2	Yes	5-6
6	2	1	Yes	5-6
7	2	2	No	5-6
8	2	2	Yes	5-6
9	2	1	Yes	1-2
10	2	2	Yes	5-6
11	5	2	Yes	2-3
12	2	1	No	1-2
13	1	1	Yes	1-2
14	1	1	Yes	5-6
15	1	1	Yes	5-6
16	1	1	Yes	5-6
17	1	1	Yes	1-2
18	1	1	Yes	5-6
19	1	1	Yes	5-6
20	1	1	Yes	5-6

TABLE VIII

SIZE OF THE LIBRARY

Elementary School No.	Length	Width	Square Feet of Floor Space	Can Be Expanded
1	18	26	468	No
2	14	16	224	No
3	10	10	100	No
4	24	51	1224	No
5	24	33	792	No
6	30	47	1410	No
7	19	26	496	No
8	9	28	252	No
9	14	23	322	No
10	16	21	336	Yes
11	21	26	546	No
12	17	32	544	Yes
13	10	12	120	Yes
14	16	25	400	No
15	30	33	990	Yes
16	20	12	240	Yes
17	13	31	403	No
18	25	42	1050	No
19	26	37	962	No
20	30	48	1440	No

items in the library. Five of the schools have some possibilities of enlarging their library space by expanding into an adjoining room by removing the partitions.

Using thirty-five square feet, which is stated in Chapter II as being necessary for each student to work effectively in the reading room, 875 square feet of floor space is needed for a class of twenty-five students. Only six libraries had adequate space to accommodate a class of twenty-five or more students according to this standard.

SHELVING

On the average one linear foot of shelving will hold ten regular elementary library books. On this basis the number of books that can be shelved in the libraries visited, ranged from 840 to 5,500. The linear feet of shelving for regular books in each library is given in Table IX.

Shelving which had sections longer than three feet between the upright partitions showed evidence of sagging from the weight of the books.

In libraries that did not have adjustable shelving it was necessary to turn some larger books sidewise in order to put them in their proper place on the shelves. This resulted in the books protruding from the shelf, with the exception of those shelves with a depth of twelve inches.

TABLE IX

BOOK SHELVING

Elementary School No.	Feet High	Shelf Depth	Section Length	Shelves per Section	Linear Feet	Adjust
1	5	9in.	3 $\frac{1}{2}$ ft.	5	120	Yes
2	5	12	4	5	240	No
3	6	9	3	5	60	No
4	5	9	2 $\frac{1}{2}$	5	225	Yes
5	6 $\frac{1}{2}$	9	3	5	210	No
6	5	9	3	5	105	Yes
7	5	9	3	5	150	Yes
8	7	8	3	8	476	No
9	7	12	4	6	198	No
10	7	9	3	7	336	Yes
11	6	11	3	6	198	Yes
12	6	9	3	5	550	Yes
13	6	10	3	6	540	Yes
14	7	9	3	7	216	Yes
15	5	10	3	5	390	Yes
16	7	10	3	6	84	Yes
17	7	12	3 $\frac{1}{2}$	7	147	Yes
18	5	9	3	4	168	Yes
19	5	9	3	5	255	Yes
20	6	9	3	5	252	No

Eight of the libraries had separate shelving for large picture books. The average number of linear feet of picture book shelving for the eight schools was twenty-four feet. Fifteen of the libraries had shelving for magazines. There was an average of seventeen linear feet for magazines in these libraries.

LIBRARY FURNITURE

The amount and kind of furniture available has considerable bearing upon the uses that can be made of the library. An analysis of Table X indicates that nine libraries had enough furniture, in terms of tables and chairs, to accommodate a whole class at one time. The other eleven libraries were restricted to use by smaller groups and individuals.

In order to catalog each book correctly, four standard card catalog drawers are needed for each 1,000 books. Fourteen of the libraries had enough catalog space for 2,000 or more books. The other six libraries had space for 1,500 books or less.

Filing cabinets are used in the elementary library for vertical files and for the librarian's records and materials. Only half of the libraries provided filing cabinets. Of these files, two were only two-drawer, seven were legal size and three were letter size.

TABLE X

LIBRARY FURNITURE

Elementary School No.	Tables No. Size	Chairs	Card Catalog	Filing Cabinets	Check-out Desk
1	5 3x5'	24	6 drawer	0	teacher desk
2	5 3x5	40	15	1	teacher desk
3	2 4' round	0	0	0	0
4	4 3x5	15	15	0	teacher desk
5	6 3x5	16	30	1	teacher desk
6	6 3x5	25	9	0	counter
7	5 3x6	30	15	1	teacher desk
8	3 3x5	10	4	0	0
9	1 3x5	0	4	0	teacher desk
10	3 3x5	12	15	1	teacher desk
11	1 3x5	28	10	1	counter
12	4 4' round	12	20	1	teacher desk
13	3 3x5	10	4	0	0
14	4 3x5	10	4	0	0
15	2 3x6	11	15	1	teacher desk
16	12 2x4	32	8	0	teacher desk
17	3 3x6	16	2	0	0
18	2 3x5	10	15	0	teacher desk
19	2 3x5	30	10	1	counter
20	3 4' round	36	10	1	counter
	3 4' round	36	10	1	counter
	5 3x6	34	15	1	teacher desk
	1 4' round				

All libraries visited that had check-out desks or counters had them located near the door to provide greater control of books leaving the library. Four libraries did not have check-out desks. Four had check-out counters with book drops. Twelve libraries had regular teachers desks for use as check-out desks.

None of the libraries included individual study carrels. One of the schools, however, does plan to add several in the near future.

BULLETIN BOARDS AND DISPLAY

In libraries which were previously used as elementary classrooms, the bulletin boards were left in place. In all but three schools, however, the chalkboards were no longer present or usable because the wall space was needed for shelving.

Libraries in schools built since 1952 either had bulletin boards that were three feet by six feet or four feet by eight feet. Only one of these newer schools had a chalkboard and that was four feet by four feet in size.

In one school the entire wall between the hall and the library was of glass and used for display purposes. Attractively arranged shelves were installed next to the glass. The shelves are used to display new books, models, and other items used to create interest in the library.

FLOOR COVERING

Only infrequently was carpeting provided in the elementary libraries visited. In fact, it was found in only one library. The carpet was a blend of wool and nylon that was installed over a concrete floor when the room was originally built in 1965. Comments by both the superintendent and the librarian of the school indicated that the carpet definitely improved the atmosphere of the library and helped to reduce noise considerably. Cleaning the carpet has been no problem and did not require any more time in a week to maintain than other types of floors.

Seven of the schools had wooden floors, nine had tile, two had linoleum, and two were cement which had been painted. A very dark colored surface was used in three libraries. The other seventeen had relatively light floor surfaces.

SONIC ENVIRONMENT

The ceilings of the eight most recently built schools were covered with acoustical ceiling tile. Other than the carpeting in the one school previously mentioned, this was the only acoustical treatment found in the libraries visited. None of the libraries had utilized shelving as dividers to aid in the control of sound. This is mainly because the

size of the rooms was not large enough and the dividers would interfere with the movement of students within the library.

VISUAL ENVIRONMENT

Although light diffusion panels are relatively new in schools of Nebraska, one of the elementary libraries had this type of lighting fixtures. This school was constructed within the past two years. One of the main advantages of diffuse lighting is that it produces a minimum amount of glare within the room.

Six of the libraries had incandescent lighting in which regular incandescent bulbs were used and were enclosed in globes. The other thirteen libraries were equipped with regular fluorescent light fixtures.

All of the libraries visited had one outside wall which was predominantly filled with windows. An abundance of natural lighting was available from this source. One of the problems created by large amounts of natural lighting was the control of glare and excessive brightness coming from the windows. Control of the excessive light and glare from the outside was achieved by the use of window shades and venetian blinds.

LIBRARY ACTIVITIES

The type of activities that take place within the library are limited by the amount of space and other physical

facilities and equipment available. The activities of the libraries visited were limited by the fact that nineteen of them consisted of a reading room only. The other one, school number 19, included a combination workroom and materials room connected to the library. No provisions for listening and viewing were available in any of the libraries.

The number of libraries that provided opportunities for the different reading room activities were as follows: individual study - fifteen; story hour - ten; class visits - thirteen; work projects - seven.

Books in all but one of the libraries were cataloged and classified according to the Dewey Decimal System. Books could be checked out by the students on an individual basis or the teachers could check out a group of books to be taken back to the classroom for use by the students.

As mentioned previously, the library in school number 19 was organized to serve as a center for instructional materials. In this school a room next to the library served as a library workroom and instructional materials storage room. The room was twenty-one feet by twelve feet in size. Entrance to the room could be attained from the library or from the hall making it convenient for use by both the librarian and teachers.

Work and storage facilities included thirty-eight feet of counter covered with formica, a sink, eighty-four linear feet of open shelving, seventeen feet of cupboards

above the counter, four sections of storage drawers and ten feet of base cabinets below the counter, three legal files, and a storage cabinet for filmstrips and tapes. The room was used for the storage of books, magazines, tapes, filmstrips, charts, maps, slides, recordings, models, and the different types of audio-visual equipment owned by the school.


Four of the twenty libraries were in use during the summer at regularly scheduled times each week. Of these four libraries, two have outside entrances that are used. The other two must open one of the main school doors to make the library accessible to the students.

III. SUMMARY

Centralized libraries are not common in elementary schools of Nebraska. The elementary schools without central library facilities have their books located in classroom collections. These books were not cataloged in the schools studied, nor was there a central card file of the books owned by the school.

The majority of the schools not having centralized elementary libraries reported that they did not have suitable space of sufficient size available to use for library purposes at that time.

Since 1952, more thought has been given to elementary libraries in building plans for schools in the State.



Consideration has been given primarily for a reading room instead of a library which functions as a complete materials center.

All of the existing elementary libraries in the schools studied were found in school systems having more than one elementary attendance unit. These schools housed only elementary students and were separate from the high school grades.

The accreditation rating of a school does not necessarily indicate that it will have a centralized elementary library, however, the greatest percentage of schools having centralized libraries were "AA" accredited. No elementary libraries were found in "Minor" accredited or "Approved" schools contacted.

Considerable variations existed in the elementary libraries studied. These variations range from libraries that serve as storerooms for books to those with combinations of reading rooms and work-storage rooms. The materials center concept has not been realized to any great extent in the elementary schools studied. Provisions for listening and viewing, conferences, librarian's office, and adequate storage for materials were not available in the schools included in the study.

CHAPTER IV

EDUCATIONAL SPECIFICATION GUIDELINES FOR THE ELEMENTARY LIBRARY

The basic function of the elementary library is to facilitate the instructional program of the school. This means that it must be considered, not as a separate entity, but as an integral part of the over-all educational program. It means that the library must be developed in harmony with the philosophy and purposes of the entire school.

Elementary library planning is a task that should involve the educational staff of the school because the library needs to be tailor-made to meet the specific requirements of each particular school. It should involve those people who are most familiar with the objectives of the school and are aware of the physical facilities needed for the present and future instructional program. After their development the plans are then set forth in educational specifications.

Educational specifications are developed to interpret the requirements of the school program to the architect in such a way that the completed facility will serve the function for which it was intended. The written educational specifications should include a description of the program and its underlying philosophy, the activities to be housed, people to be accommodated, spatial relationships, areas,

equipment and furniture, environmental provisions, and description of any special features required.

LIBRARY PROGRAM

In order to develop the elementary library so that its program of services will be in keeping with the over-all educational program of the school, it is necessary to include in the written educational specifications a description of how it is intended to function. This description would include an analysis of desired educational outcomes, discernible current and future trends in teaching methods and curriculum development, specific teaching and non-teaching activities, and the desirability of services outside of regular school hours.

LIBRARY ACTIVITIES

Included in the educational specifications should be a discussion of the various types of materials and equipment that will be housed in the elementary library. One of the first considerations is to determine if the library will provide housing for a book collection or if it will be a center for all materials used in the instructional program. The types of activities will vary considerably depending upon the materials available.

It is necessary for the architect to know the various kinds of activities that will take place in the elementary

library so that the physical facilities can be planned accordingly. Brief descriptions of the activities involved in reading, study, reference work, browsing, instruction in library skills, reading guidance, use of audio-visual materials, conferences, work projects, ordering, processing, and repair are needed to help the architect in producing a functional facility.

PEOPLE TO BE ACCOMMODATED IN THE LIBRARY

Under this part of the educational specifications, information about the people who will be using the various areas of the library should be included. Answers need to be given to the following questions: What is the size of the library staff? How many classrooms of students will the library serve? How many students will need to be seated at one time in the reading room, the conference room, the workroom, in the independent study area, for listening and viewing? What provisions are needed for the teachers that will use the library?

SPATIAL RELATIONSHIPS

The elementary library should be located near the center of the school building within reach of the main arteries of traffic. Due to the fact that students in grades five and six will use the library more than the other grades, it is desirable to have these classrooms close to the library.

An outside entrance to the library will be extremely beneficial in using the library after school hours or during the summer when school is not in session.

Lunch rooms, gymnasiums, or other noise producing areas should not be placed next to the library. Fixed architectural features such as load-bearing walls and rest-rooms next to the library will make expansion difficult if it is needed at a later date.

PROVISIONS FOR THE READING ROOM

SIZE: 30-35 square feet per seated student or a minimum of 1200 square feet.

SEATING: For the largest class plus 10 or 10 percent of the school enrollment, whichever is greater.
Chair sizes ranging from 14 to 17 inches.

TABLES: 3 by 5 feet or round with a diameter of 4 feet, 25 to 28 inches high. Allow one table for every four students to be seated. Tables and chairs should be provided to accommodate the largest classroom of students. Additional seating could be in the form of individual carrels which have outlets and earphones for listening and viewing.

SHELVING: FOR REGULAR BOOKS

Shelf depth - 8 inches.

Section height - 5 feet.

SHELVING: Books per linear foot - 10
(con't.)

A base of 4 to 6 inches is needed below the bottom shelf to keep books off of the floor far enough so that they are not soiled. A bottom shelf which slants downward in back will enable students to see the call numbers and titles of the books on the lower shelf from a standing position.

FOR PICTURE BOOKS:

Shelf depth - 12 inches.

Section height - 36 to 40 inches.

Length between upright partitions - 3 feet.

Base - 4 to 6 inches.

Books per linear foot - 20.

Picture book shelving should be subdivided with $\frac{1}{2}$ inch partitions every 6 to 8 inches to keep the books in an upright position.

FOR MAGAZINES:

Shelf depth - 16 inches - slanting.

Section height - 5 feet.

Base - 4 to 6 inches.

All shelving should be adjustable to accommodate various sized books. Non-adjusting shelving

results in wasted shelf space or in making it necessary to keep some books out of their proper order. The Nebraska State Department of Education is presently recommending a minimum collection of 2400 books for elementary libraries. Shelving should be provided for this number of books plus the anticipated growth in the collection or on the basis of 10 books per student, whichever is greater.

CARD
CATALOG:

Allow 4 drawers for each 1000 books. Five-drawer units are the most economical and practical. Units can be added on top to a maximum height of 45 inches or along side of each other as needed.

CHARGING
DESK:

Height - 32 inches, width - 28 inches, length - 72 inches with built-in book drop and charging facilities.

OTHER
EQUIPMENT:

4 drawer legal-size files for vertical file, dictionary and atlas stands, book trucks, bulletin boards, display areas, and informal furniture as required.

WORKROOM, STORAGE, AND OFFICE

In some schools combination rooms which provide space

for the work area, the storage area, and the librarian's office will be found practical, therefore, these areas will be considered together. However, each area will require the same space whether they are in one room or in separate rooms. The areas mentioned above should be adjoining the library with entrances from the main reading room. Glass partitions between the reading room and these areas will facilitate supervision by the librarian.

**WORK
AREA:**

Allow 200 square feet for the work area. This would leave about 10 by 12 feet of clear work space after counters and shelving are installed. Equipment would include a counter 36 inches high with a depth of 24 to 30 inches covered with formica; kneehole space below the counter and stools for two people to work; a sink in the counter with hot and cold water; typewriter and typing table; a minimum of 250 feet of shelf space which can be a combination of open shelving 12 to 15 inches deep for storage of back issues of magazines and supplies, and closed cupboards and drawer space as needed. It is necessary to have an exhaust fan in the work area to remove odors and fumes of lacquer, etc.

STORAGE: For printed materials allow 200 square feet and an additional 200 square feet for audio-visual

storage. The amount of storage shelving and cabinets can be determined by taking an inventory of the equipment and materials to be housed in this area. Consideration should be given to the storage of various kinds of projectors, projection screens, phonographs, radios, televisions, films, filmstrips, tapes, records, transparencies, maps, charts, posters, repair and replacement parts, and supplies. Allowance must also be made for the anticipated growth in the collection of these materials and equipment.

OFFICE:

Unless the school is large (over 500 pupils), the librarian's office may need to be included as part of the workroom. The office area may be separated from the rest of the workroom with shelving to serve as dividers. From 80 to 100 square feet will be needed for office purposes. The necessary furniture will include a desk, two or three chairs, legal-sized file, typewriter, some storage for order blanks, book catalogs and office supplies. One section of shelving should also be provided.

CONFERENCE ROOM:

Room Size - 120 square feet.

Furniture - 36 by 90 inch table, 8 or 10 chairs,

one section of shelving. A small chalkboard and bulletin board should also be provided. Acoustical treatment is necessary to make the room sound proof.

LISTENING AND VIEWING: Provisions for listening and viewing are essential within the library facility. It may be necessary in the smaller schools, however, to accommodate these activities in connection with the other areas of the library. This may be accomplished in several ways including: (1) the provision of individual carrels in the reading room equipped with headsets and electrical outlets; (2) the provision of a screen and light control within the workroom or storage area; or (3) the provision of the necessary equipment to incorporate these activities into the conference room.

VISUAL ENVIRONMENT

Two basic considerations in lighting for the elementary library are the achievement of brightness contrasts within the ratio of 1 to 10 in the visual area and the control of reflective glare. Appropriate levels of lighting can be achieved with either fluorescent, incandescent or polarized

lighting. Therefore, the major task in the selection of lighting is not the type of lighting, but the proper installation of the lighting selected to create a desirable visual environment.

The problem of reflective glare can be reduced if the various surfaces within the library such as the walls, tables, and floors have finishes on them that will not produce glare within the visual field. It is usually desirable to use non-gloss surfaces where ever possible.

Special lighting features also need to be presented in the educational specifications. Examples of special lighting might include lighting on individual carrels, displays, above the counter in the workroom, or the control of lighting for film viewing.

A minimum of three electrical outlets should be provided on each wall. At least three outlets should also be placed above the work counter. All outlets and light switches should be located so that they do not interfere with shelving.

SONIC ENVIRONMENT

One of the first considerations in sound control for the library is to have it located away from main sources of noise and to insulate the existing walls surrounding the library area. Ductwork leading into the library can be insulated so that it does not carry sound.

Acoustical control within the library will involve treatment of the floor, ceiling, and walls. A variety of ceiling tile is available to properly treat the ceiling. Drapes may be used on the walls to absorb sound and its reverberation. The use of shelving as dividers will also aid in reducing reverberation. The type of floor coverings available have a wide range of sound retarding qualities.

Of all types of flooring, carpeting has the greatest ability to control sound. Rubber tile, cork, and solid vinyl tile have the best sound reducing qualities of the resilient types of flooring.

THERMAL ENVIRONMENT

Heating and ventilating ducts should not come in direct contact with shelving because of the damage that will result to glued joints of the shelving and to the book bindings by high temperatures.

Ventilation is considered adequate if six air changes per hour are accomplished. Serious consideration needs to be given to air conditioning because libraries in the future will be put to much greater use during the summer months than they are at the present time.

AESTHETIC CONSIDERATION

An elementary library that presents an informal, home-like atmosphere will be the most appealing to the students. In order to achieve this type of atmosphere, consideration may be given to the use of carpet, using both round and rectangular tables for variety, and providing some occasional furniture for student use.

CHAPTER V

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

I. SUMMARY

The centralized library is a relatively recent innovation in the elementary schools of Nebraska. Even more recent is the concept that the elementary library should serve as a center for all instructional materials owned by the school. Undoubtedly the centralized library will become a basic part of the instructional program as new school plants are built which provide adequate space for the library to be established.

The Purpose

The purpose of this study was to develop guidelines for writing educational specifications for the centralized elementary school library in new school building construction and to determine how existing space in school plants might be used to establish a central library facility.

The Procedure

The first step was to determine the feasibility of providing elementary libraries in schools not presently having them, by utilizing existing space within the school building. From the fifty elementary schools personally

contacted, information was obtained regarding the availability and suitability of library space, the classification of books, and the present location of library materials.

The second step was to visit twenty schools with some type of centralized elementary library facilities to determine the characteristics of these libraries. All twenty schools were part of a school system having two or more elementary attendance units.

The third step was to establish guidelines to aid school building planners in writing educational specifications for centralized elementary libraries. The guidelines were based on the findings of the visits to the twenty libraries and upon information gleaned from the literature.

II. CONCLUSIONS

Evidence found in the review of the literature established the need for the centralized elementary library. It also pointed out the need for well-written educational specifications in library planning. This information is found in Chapter II, entitled Review of the Literature.

Chapter III describes the characteristics of elementary library facilities as found in seventy Nebraska schools. This information is presented in two parts. One part indicates how library needs are met when a school does

not have a centralized elementary school library. The other part analyzes the type of facilities available in existing centralized elementary libraries in Nebraska.

Chapter IV presents guidelines that can be used by school building planners to establish functional facilities for the centralized elementary library. These are based upon the concept that the library should be a center for all instructional materials.

The conclusions and recommendations in the following part of this chapter are based upon the opinion of the author drawn during the course of this study.

The need for centralized elementary libraries as indicated from a survey of the literature.

1. Centralized elementary library facilities are the most effective method of providing library services to students.
2. As students become more involved in developing independent study skills, the need for elementary libraries will increase.
3. Library facilities should include provisions for a reading area, work area, storage, librarian's office, listening and viewing, and a conference area.
4. Educational specifications are a necessity in developing effective library facilities.
5. Unless the educational specifications convey to the architect an understanding of the desired purposes of the elementary library, it will not become a functional part of the school program.

Findings regarding provisions for elementary libraries in
Nebraska schools.

1. Centralized library facilities are not common in the elementary schools of Nebraska. The library materials in the schools without a library are located in classroom collections throughout the various elementary grades.
2. Schools without centralized libraries do not have the book collection cataloged, nor is there a card file of the books owned by the school.
3. Only seven of fifty schools contacted, not having libraries, felt that they had space which could be used to begin a centralized library.
4. Unused classrooms or other unused space in a school plant can be used to begin a centralized library. Twelve of the twenty libraries visited were housed in rooms originally intended for other uses.
5. Of the twenty schools included in the study, having centralized elementary libraries, those built since 1952 included some provisions for centralized library services in the original building plans.
6. Nineteen of the twenty schools with centralized libraries provided only for the reading room. The other one included the reading room plus a work-storage room. None of the twenty had facilities for a complete instructional materials center.
7. A high level of accreditation for a school district was no assurance that centralized elementary libraries would be present.
8. Centralized elementary libraries were found only in those school systems with more than one elementary attendance unit.
9. Those elementary schools with centralized libraries housed only elementary students in the attendance unit.

Conclusions

Five conclusions seemed to stand out as the most significant ones in this study. They are as follows:

1. There were no elementary libraries which had been fully developed as instructional materials centers within the group of schools studied.
2. Space was not available in existing school buildings to house the elementary library as a complete instructional materials center.
3. The book collections in elementary schools not having centralized library facilities seemed to be limited in use to the classrooms in which they were located.
4. Greater effort was made for centralized library development in elementary schools that were housed in separate buildings from high school grades.
5. It appears that an elementary school will obtain a functional library materials center only if planned for in the original school building.

III. RECOMMENDATIONS

The development of centralized elementary libraries is significant to the advancement of the educational programs of the elementary schools. Even though a school may not be able to establish a centralized elementary library immediately, various steps can be taken to make existing library materials more accessible.

The following recommendations are presented because of the need for improved elementary library services in Nebraska schools:

1. All schools should establish a long-range plan for the development of the centralized elementary library.
2. Schools which have no space available for a centralized elementary library should catalog the books in their classroom collections and make a central card file on all books owned by the school. This could make the books available to a greater number of students and would be the beginning of the centralization process.
3. Unused classrooms or other adequate space that can be spared should be used for the establishment of a centralized elementary library.
4. Provisions for centralized elementary libraries should be made in all new elementary school building projects.
5. The elementary library should be developed as a center for all instructional materials.

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APPENDIX

LIBRARY FACILITIES CHECKLIST

Name of School _____ City _____
 Current Enrollment _____ Capacity Enrollment _____
 Grades Included _____ Age of Building _____
 Type of Structure (stories) _____
 Was the library included in the original building? _____
 If not, was the room(s) previously a classroom? _____
 Other type of room? _____
 Describe the location of the library facilities:
 What floor? _____
 Nearest what grades? _____
 Central location? _____
 Near main flow of traffic? _____
 Does the library have outside entrances? _____ No. _____
 Reading Room:
 Length _____ Width _____ Seating Capacity _____
 Types of Seating _____
 Size Range of Chairs _____
 Is additional seating available for story hour? _____
 Stacking Chairs? _____ Folding Chairs? _____
 Tables: type _____ size _____ No. _____
 Carrels: type _____ size _____
 No. _____ Electrical outlets? _____
 Occasional Furniture: Describe, _____

Check-out Desk: Dimensions _____ Location _____

Card Catalog: Location _____ No. of Sections _____

Height of Lowest Drawer _____ Highest _____

Shelving:

For Regular Books: Number of Feet _____ Height _____

Depth _____ Length of sections _____

Number of Shelves per Section _____ Adjustable? _____

For Magazines: Feet _____ Depth _____ Height _____

Length of Sections _____ Adjustable? _____

For Picture Books: Feet _____ Depth _____ Height _____

Length of Sections _____ Adjustable? _____

Other Shelving: _____

Number of Files: Legal _____ Letter _____

Bulletin Boards: Size _____ Type _____ No. _____

Display Areas - Describe: _____

Floor Covering: Type _____ Color _____ Design _____

Acoustical Treatment:

Ceiling _____

Walls _____

Floors _____

Paint or Wall Covering _____ Color _____

Ceiling _____ Color _____

Lighting: Natural _____
 Incandescent _____ Fluorescent _____
 Direct _____ Indirect _____
 Type of Fixtures _____

Workroom:

Location in relation to reading room _____
 Does it have glass panels? _____ Size _____
 Ventilation _____
 Exhaust _____
 Furniture _____
 Shelving _____
 Counters and Sinks _____
 Floor Covering _____
 Lighting _____
 Acoustical Treatment _____

Storage Room:

Size: Length _____ Width _____
 Furniture _____

Storage for:	_____ books	_____ pamphlets
	_____ magazines	_____ newspapers
	_____ pictures	_____ recordings
	_____ tapes	_____ maps
	_____ globes	_____ exhibits
	_____ films	_____ filmstrips
	_____ slides	_____ charts
	_____ models	_____ A-V screens
	_____ film projectors	_____ overhead projectors
	_____ opaque projectors	_____ phonographs
	_____ tape recorders	

Librarians Office:

Location in Library _____

Furniture and Equipment _____

Size: Length _____ Width _____

Listening and Viewing Area:

Location _____

Size _____ Acoustical Treatment _____

Equipment _____

Furniture _____

Conference Room:

Location _____

Size _____ Acoustical Treatment _____

Furniture _____

Does room have glass panels? _____

Are all books in the library cataloged? _____

Are call numbers on books? _____

Number of library books _____

Are some library books located in the classrooms? _____

What activities take place in the library?

_____ individual study	_____ class visits
_____ story hour	_____ work projects

Can students check out books? _____

Do teachers check out a group of books for the class? _____

Can the library be expanded if needed? _____

Is the librarian full-time? _____ part-time? _____ hours _____

What is the amount of the library budget? _____

What staff members are involved in library planning?

Is the library used when school is not in session?

evenings weekends summers

What do you believe to be the greatest handicap of your library facilities?

____ not enough books

____ not enough floor space

____ acoustics

____ shelving

____ lighting

____ ventilation

____ furniture
