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A study of problems presented by elementary school buildings and facilities

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A STUDY OF PROBLEMS PRESENTED BY ELEMENTARY SCHOOL BUILDINGS AND FACILITIES

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CHAPTER I

INTRODUCTION

Statement of the Problem. Is the approved educational program in seventeen selected elementary schools in San Joaquin County hindered by buildings and building facilities? This study has been done because of the increased interest in school buildings and school facilities in California.

> Rapid expansion has characterized the post-war period in California communities. Along with it has come the problem of expanding school facilities to meet increased enrollments.[1]

The tremendous growth in population in this state during the last ten years has brought the state to a position from which it can no longer view the school building program, and lack of same, with a detached air. The only effective training for citizenship in a democracy is practice in democratic living. The surroundings in which this living is done are of the utmost importance.

> The schoolhouse is a place for many kinds of learning; the schoolhouse itself is an instrument of education. It can teach children much of beauty, of useful ordering of space, and of the possibilities of harmonious living. There is increasing recognition of the school building as a place that will help children to grow to their best physically as well as mentally;

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[1] John L. Reid, "How One Architect Met California's Postwar Needs," The School Executive, 69:7, (March, 1950), 62.

> their seeing, posture, nutrition, and every bodily process should be helpd toward the ideal by the conditions of life at school.[2]

The Importance of the Problem. In the five years preceding World War II the attention of educators was beginning to be focused on the building program. Then with the increase in population in California and the changing in teaching methods during that time and during the war period, it was found that the post-war school housing was very inadequate. "Today the immediate need for new school buildings is overwhelming."[3]

"Changes in method of teaching requires building facilities that may not be included in many older buildings."[4] The function of the school is to help each individual grow to his fullest potentialities in an environment that is pleasing, wholesome, and stimulating. "Mid-nineteenth century buildings, grounds, and furniture in mid-twentieth century American schools constitute serious handicaps to

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[2] American Association of School Administrators, American School Buildings, Twenty-seventh Year Book (Washington, D.C: Association of School Administrators, 1949), p. 88.

[3] Ibid., p. 5.

[4] Merele A. Stoneman, Knute O. Broady, and Alanson D. Brainard, Planning and Modernizing the School Plant (Lincoln, Nebraska: University of Nebraska Press, 1949), p. 26.

the adequate school program."[5] Yet these inadequacies are tolerated by teachers, administrators, and the general public. In cases where such facilities are operating, the losers are the children, who make up the next generation, which in reality is the future of America and democracy.

This problem is important because it delves into the problems presented by older schools. This is the first time that anyone has made such a survey of these specific San Joaquin County Schools. This study attempts to illustrate the problems that the teachers, administrators, and pupils face each day in the educational process.

The present financial conditions will not allow for sweeping changes.

> The more that today's citizens reflect on the demands to be met by the school plant, the more they realize that new schools must be more spacious and must be provided with many more mechanical features than the typical building in use today. This added space and serviceability means added cost. And, altho added costs must be met, school money remains as difficult as ever to secure.[6]

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[5] Ernest Hilton, Rural School Management (New York: American Book Company, 1949), p. 177.

[6] Twenty-seventh Yearbook, op. cit., p. 5.

New buildings would be desirable, and rehabilitation of others would alleviate many problems. However, a study of each school's problems is necessary. Within each school those concerned can begin to plan together ways in which their problems can be met. No problem can ever be solved correctly unless a careful study and analysis of that problem is done. This study attempts to make such an analysis, and will be available for study by those who so desire.

Purpose of this Study. The purpose of this study is to determine the extent and nature of problems presented by buildings and building facilities in certain elementary schools in San Joaquin County. This study is not to be considered the final answer. In no sense can one study be considered all-inclusive. But it is the purpose here to shed light upon any problems that may exist, and in that way help teachers and administrators in their work.

Method of Selection of the Schools. The method of selection was done in the following ways:

(1) Schools were selected by their nearness to Stockton.

(2) Schools were also selected by the Average Daily Attendance that they maintained. It was felt that an ADA of one-hundred or less would be a good classification. This would put the schools well below the desirable

minimum. "The enrolment in the kindergartens and Grades one to six should not be fewer than 175 pupils with at least seven full time teachers employed; a more desirable minimum being 300 or more pupils with twelve or more full-time teachers."[7]

The Mean ADA for the seventeen schools was 103.88. In light of the above statement, the Mean ADA of the schools under consideration brings them into the small school class, and well below the desirable minimum ADA.

The Schools. The following schools were ones that replied to the questionnaire.

1. Banta School: This school is located on the Banta Cutoff, Highway 50, two miles north of Tracy. The school is an eight grade school with six teachers. It was built in 1926 and has an A.D.A. of one hundred and seventy.

2. Bellota School: This school is located on California State Highway 8, four miles east of Linden. Linden is eight miles east of Stockton. It is an eight

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[7] Ibid., p. 44.

grade school with two teachers. It was built in 1950 and has an A.D.A. of thirty-one.

3. Bruella School: This school is located five miles northeast of Lodi, which is thirteen miles north of Stockton. It is an eight grade school with four teachers. It was built in 1900, with additions in 1921, and has an A.D.A. of one hundred and twenty-three.

4. Calla School: This school is located two miles east of Manteca on State Highway 120. It is an eight grade school with three teachers. It was built in 1921 and has an A.D.A. of seventy-three.

5. Castle School: This school is located five miles east of French Camp on French Camp Road. It is an eight grade school with three teachers. It was built in 1924 and has an A.D.A. of eighty-five.

6. Davis School: This school is located three miles north of Stockton on U.S. Highway 99. It is a kindergarten through eighth grade school. It was built before 1926, but remodeled in that year. It has an A.D.A. of two hundred and nine with eight teachers.

7. Delphi School: This school is located six miles east of Stockton on Highway 8. It is an eight grade school with three teachers. It was built in 1904 and has an A.D.A. of sixty-five.

8. Elkhorn School: This school is located seven miles north of Stockton on Davis Road. It is an eight grade school with three teachers. It was built in 1898 and has an A.D.A. of eighty.

9. Everett School: This is located fourteen miles east of Stockton near Peters. It is an eight grade school with two teachers. It was built in 1921 and has an A.D.A. of twenty-five.

10. Fairchild School: This school is located southwest of Stockton on Roberts Island. It is an eight grade school with two teachers. It was built in 1929 and has an A.D.A. of thirty-six.

11. Farmington School: This school is located fourteen miles east of Stockton on Highway 4. It is an eight grade school with four teachers. It was built in 1925 and has an A.D.A. of one hundred and ten.

12. Four Tree School: This school is located fourteen miles southeast of Stockton on Mariposa Road. It is an eight grade school with two teachers. It was built in 1949 and has an A.D.A. of sixty.

13. French Camp School: This school is located four miles south of Stockton at French Camp. It is an eight grade school with twelve teachers. It was built in 1927 and has an A.D.A. of three hundred and forty.

14. Garden School: This school is located southwest of Stockton on Roberts Island. It is an eight grade school and has one teacher. It was built in 1940 and has an A.D.A. of twenty-eight.

15. Henderson School: This school is located two miles south of Lodi on the lower Sacramento Road. It is an eight grade school and has four teachers. It was built in 1920 and has an A.D.A. of one hundred and eight.

16. Lathrop School: This school is located twelve miles south of Stockton at Lathrop. It has kindergarten through eighth grade with nine teachers. It was built in 1916 and has an A.D.A. of two hundred and ninety-one.

17. Lincoln School: This school is located two miles north of Stockton on the Lower Sacramento Road. It has kindergarten through eighth grades. It has nineteen teachers and an A.D.A. of six hundred. Part of the building was built in 1878, part in 1943, 1950, and 1951. Contracts have been let for more building to alleviate overcrowdedness.

The average age of the schools surveyed is twenty-five years. This puts them in a Post World War I class, being mostly constructed before the Field Bill was passed.

Source of Data. The data used in this study was obtained from a questionnaire submitted to principals of the schools listed in this chapter.

Both new and old schools reported and made responses to the questionnaire. Approximately 57 per cent of the schools contacted responded to the questionnaire. Reports on previous studies on the returns of questionnaires indicate a response of from one fourth to one third of the total mailed. On this basis it would be fair to assume that the responses to the questionnaire were extremely high.

The Questionnaire. The questionnaire was constructed in accordance with accepted standards as proposed by the National Education Association Research Bulletin, January, 1930. The following is an Informal Rating Plan for Questionnaires. Rating for the questionnaire under consideration is also given.

		Yes	No
1.	Is the questionnaire adequately sponsored?		X
2.	Is the purpose of the study frankly stated? And is it one which calls for a reply?	X	
3.	Is the questionnaire on a worthy educational topic?	X	
4.	Is the questionnaire well-organized?	X	
5.	Are questions clearly and briefly stated?	X	
6.	Can most of the questions be answered with a check mark, figure, or brief fact? And is the number of questions requiring subjective answers kept to a minimum?	X	
7.	Is the information requested, not available elsewhere, and available only through the questionnaire?	X	

	Yes	No
8. Is the questionnaire set up in proper mechanical form?	X	
9. Are the demands of the questionnaire reasonable?	X	
10. Is the summary of the results or other proper return promised the respondent?[8]	X	

Only in the case of adequate sponsorship does this questionnaire not meet the requirements set forth by the National Education Association.

In addition to the above, the questionnaire was provided with a self-addressed envelope in order to facilitate its return.

The information on the questionnaire was derived from several sources. The Strayer-Englehardt Score Card for Elementary School Buildings was used. Standards, as proposed by the American Association of School Administrators, were used in the questionnaire. Yearbooks of the American School and University presented standards for this questionnaire. Also, much information for this questionnaire was derived from the series of reports given in Education 282, Problems of School Housing, College of

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[8] "A Proposed Plan For the Cooperative Regulation of Questionnaires," Research Bulletin of The National Education Association (Washington, D.C: National Education Publishing Dept., 1930), p. 39.

the Pacific in the summer of 1950.

The questionnaire was approved by Dr. W. R. Gore, Chairman of the Thesis Committee. No other authorities were consulted in the construction of this questionnaire. No trial test was used to eliminate items not suitable. In this regard, the questionnaire cannot be considered entirely reliable.

Definition of Terms. In order to avoid confusion during the reading of this thesis, the following terms must be defined and made distinct.

1. Hindrance. A hindrance shall be construed to mean anything that prevents a school from offering a program of education that would make it possible for each child to reach his full potentialities; anything that would make the school and its surroundings unsafe, hazardous, or inimical to the welfare of children in attendance; or anything that would reduce the effectiveness of the school as a disseminator of democratic ideas and ideals within the community that it serves.

2. Buildings and Building Facilities. Buildings and building facilities shall be construed to mean the physical part of the building or buildings, the sites upon which the building or buildings are located and the

areas adjacent to the building or buildings that have a direct bearing upon the use of the building or buildings.

3. Approved Educational Program. No few words can aptly define this term. However, a statement from the San Joaquin County Curriculum Guide can be used to define this term in an acceptable manner.

> Education must be child-centered. Curricula may be written and rewritten, but what is really important is the child. Education should guarantee that each child will achieve his potentialities at each successive stage of his development. That we should strive to educate the individual, taking cognizance of his mental, physical, and moral possibilities, so that he may achieve the maximum amount of good which is possible for himself, his community, his nation, and the world. That each child is entitled to his fair share of the teacher's time, school materials, and plant equipment, irrespective of mental ability, status as transient or permanent, or economic status.[9]

To this definition might also be added that a good program provides for his safety, his health, and his welfare to, from, and at school.

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[9] San Joaquin County School Dept., Guide to Curriculum for School Personnel of San Joaquin County. Stockton, California, 1950, p. 1.

CHAPTER II

RELATED LITERATURE

Introduction. To give consideration to the aforementioned schools, research must be done in this field, and to do this research, books and periodicals must be used. Literature related to the subject of school housing is limited. Much thought has been given by authorities to the problem of school housing. Most of the literature deals with the physical standards, and not in a way that will enable one to ascertain trends in school building facilities so as to eliminate problems and increase the sociological use of school buildings. Because this study attempts to find the problems presented by buildings and building facilities, if any, only those books and periodicals that are of related value are reviewed here.

Related Literature. One of the first modern contributions to the elementary school building program was a book published in 1916, and later revised in 1933, by George Strayer and Nicholas L. Engelhardt. This small book, entitled, "Standards for Elementary School

Buildings",[10] sets forth a score card for elementary buildings, and sets up standards for scoring such buildings. This score card has the following divisions:

1. Site
2. Building
3. Service Systems
4. General Classrooms
5. Special Activity Rooms
6. Kindergarten
7. General Service Rooms
8. Administrative Rooms.

These standards set forth are standards accepted today as basic needs for each school. These standards have been used in the survey and analysis of many schools, proving highly successful and reliable.

The Twenty-seventh Yearbook of the American Association of School Administrators, entitled "American School Buildings,"[11] is a modern, up-to-date account of the needs, problems, and features in school housing. This book is exceptionally well-written, giving the reader an excellent overview of plant needs and construction. This book, a summation of articles by many authors, presents a chapter

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[10] George Strayer and Nicholas L. Engelhardt, Standards for Elementary School Buildings (New York: Bureau of Publications, Teachers College, Columbia University, 1932).

[11] Twenty-seventh Yearbook, op. cit.

by chapter account of desirable standards in school house construction. No other book gave the author such a wealth of data. The philosophy of this book is that school housing should meet the needs of the whole child. Under the present day philosophy of education in the county involved, this is necessarily true. Certainly, any construction that considers just part of the child, is not suitable for education of children.

Another book with a modern outlook is one entitled "You Want To Build A School," written by Charles Bursch and John Reid. This book, co-authored by one of California's State Department men is of exceptional worth in light of school house construction procedure. The philosophy behind this book is also good in considering school house planning that prevents any construction that hinders the educational program, for Dr. Bursch is a definite advocate of the child-centered school. Dr. Bursch brings to focus the significance of curriculum planning as of profound importance in the planning of school housing. This brings to light the need for meeting the physical and philosophical aspects of the educational program in our present day society. The philosophical and societal changes are moving rapidly in comparison with actual physical construction. This does not mean that the physical means are

not available, for there is a great wealth of new materials and ideas readily available to contractors and architects. The great time lag is evident in our tax structure and in public apathy to the changes so badly needed in our school house construction. Dr. Bursch gives a stimulus to the before-hand planning to insure a successful conclusion to the building program.

In 1949 the National Council on Schoolhouse Construction brought out their publication entitled "Guide for Planning School Plants".[12] Several chapters in this publication set up standards for the education, community activities, health and safety, and service facilities in a well-developed school and school program.

> Educational aims and objectives are not easy to define, because education for an ever-changing society must be dynamic. Yet it is both an opportunity and an obligation for the local school system to undertake this task as the first step in a building program."[13]

The school facilities, as brought out in this publication, are more than a shelter from the elements. The

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[12] National Council on School House Construction, Guide for Planning School Plants (Nashville: Peabody College, 1949).

[13] Ibid., p. 173.

The school facilities represent the people and their attitudes toward education. A school plant can, by its very construction, teach children attitudes and ideals. These attitudes represent a great part of that "whole" that should be brought under the influence of a worthwhile educational process in order to bring out a continuing growth of democracy and a desire for democratic living. Certainly the desire for democratic living must be instilled in growing children if such a way of life is to remain.

A Teachers College Contribution to Education, Columbia University, entitled "Desirable Physical Facilities For An Activity Program," by Frank M. Long,[14] brings to light the need for a physical plant that takes care of the physical growth and activity of children as well as the intellectual growth. This publication, published in 1933, points out the desirability of facilities such as lockers, extra work space, extra chalkboard space, kindergartens, special rooms, playrooms, etc.

> The expansion of the elementary curriculum during the past twenty-five years, together with the more general inclusion of the kindergarten and the increased emphasis on health, has resulted

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[14] Frank M. Long, Desirable Physical Facilities For An Activity Program (New York: Teachers College, Columbia University, 1933).

> in a demand for additional and diversified school building facilities.[15]

This was advanced thinking for 1933. It cannot be considered as such today. It must be considered as necessary to educate children to the utmost of their capabilities.

"The American School and University Yearbook for 1946,"[16] deals in desirable standards for various areas of school house planning, from planning what to build to how to build. The article by H. L. Smith, entitled "Trends in Education Significant for School Building Planning," was of much use. Some of the trends he suggested that must be considered are as follows:

1. Equal opportunity is becoming a lively issue.

> This trend has greatest significance for rural and poorer districts. We have scarcely scratched the surface in designs for adequate building in which to carry on a well-rounded essential rural program. Great expansion in building in this rural field is almost certain.[17]

2. The Public demands a share in school facilities.

> Heretofore, schoolmen have too often taken the attitude that schools are an independent unit. But the people of the community are knocking at the

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[15] Ibid., p. 116.

[16] H. L. Smith, "Trends in Education Significant for School Building Planning," The American School and University Yearbook, 1946 (New York: American School Publishing Corporation, 1946).

[17] Ibid., p. 33.

schoolhouse door and demanding that they be sharers in the privileges and facilities of schools. Planners of school buildings will need to take account of the fact that school programs and community programs will have to run simultaneously at certain times, and at other times, one following the other.[18]

3. The standards of schools are being revised upwards.

The fact that standards are being revised upwards has heavy implication for schoolhouse construction. When standards are set by experts and are known by administrators and even by the teachers, and the community also, it follows that school buildings must be planned specifically to meet definite and exacting standards.[19]

4. Elementary education has come of age and can assume its rightful importance.

Gradually a change in attitude has come, so that today a most decided trend appears to lift the status of the elementary schools to a parity with that of high schools. This trend will of necessity mean expansion of building programs. But it will mean more; it will mean modern plans to meet modern standards for elementary buildings. Child life, child interests, and child welfare have come to hold such a high place in the public regard that nothing but the best in modern facilities will satisfy the community.[20]

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[18] Ibid., p. 33.

[19] Loc. cit.

[20] Loc. cit.

This article very pointedly suggests that there are definite trends to providing a modern building to meet the needs of a modern curriculum.

The June, 1950, issue of "The School Executive" carried an editorial by O. H. Story, entitled "Do We Have Good Schools?"[21]

The immediate reaction to this question is usually a very strong positive or negative answer. For those who answer no, there are many valid reasons, for certainly many of the good things a school should have are lacking. This article tells some of the good things a school should have.

"Goodness of school facilities is measured by how they lend themselves to use in activities that seem to accomplish the purposes we seek."[22] It is seen by this that school facilities are a necessity in accomplishing certain purposeful activities.

"We must becomes conscious of the significance of physical facilities -- how they help or detract from learning,

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[21] Bascom H. Story, "Do We Have Good Schools?," The School Executive, 69:14, June, 1950.

[22] Ibid., p. 14.

how they help the learning process, how they limit activities. Many buildings still reflect the factory concept of education."[23]

The "School Executive" for March, 1951, carried an article entitled "Looking Forward."[24] Mary P. Endres, the author, described the needs of a school district in Illinois and how they met their needs. A new school was built where the community as a whole took part in planning the building, and as a result felt pride in the building and in the building's attractiveness. The following quotation illustrates the feeling of sixth grade pupils when asked about the building.

WE LIKE IT HERE

Every corner of our room is well-lighted.
Our room is best because it seems like home.
The sink and workshelf are handy and give lots of room for making things.
The sound-proof acoustical tile in the ceiling makes our room quiet.
I like our school because we're not crowded.
I'm proud of Mr. Walkup because he keeps our school so clean and shiny.
I like the idea that our parents wanted to give us such a fine place to go to school.[25]

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[23] Ibid., p. 13.

[24] Mary P. Endres, "Looking Forward," The School Executive, 70:50, March, 1951.

[25] Ibid., p. 50.

The foregoing definitely points out pride of ownership, a desirable attitude that school children should have. The need for attractiveness and a homelike atmosphere are distinct needs, needs that should be met by school facilities.

N. L. Engelhardt, "School Executive" for February, 1950, wrote an article, "Planning Kindergartens in San Francisco."[26] This article gives desirable standards for kindergartens, inside and out.

"The general kindergarten area will have in it approximately 1000 square feet."[27]

"In the general work area tables and chairs are provided for thirty pupils with two pupils per table."[28]

"The second major section of a kindergarten suite is the personal hygiene area containing toilets and lavatories."[29]

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[26] N. L. Engelhardt, "Planning Kindergartens in San Francisco," The School Executive, 69:6, February, 1950.

[27] Ibid., p. 51.

[28] Loc. cit.

[29] Loc. cit.

"The playground should directly adjoin the indoor kindergarten suite."[30]

The fact that such definite planning goes into kindergartens leads to the belief that they are of definite educational value and are here to stay.

Schools are changing rapidly, more rapidly than some realize. "Classrooms Need Movable Equipment," an article by Mary Mitchell in the November, 1949, issue of "School Executive" brings this to light.[31] The old ideas of rigid and formal rows of children soaking up learning is going rapidly. Mary Mitchell says this:

"Is there not an analogy between the building of a program and the building of a building? It would seem that the same elements are needed in both."[32] To emphasize this point, this article lists items of equipment that a good teacher would choose if she could.

1. A classroom large enough to have free floor space.

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[30] Ibid., p. 51.

[31] Endres, op. cit., p. 50.

[32] Ibid., p. 60

2. Plenty of open bookcases.
3. Shelves for housing hundreds of blocks.
4. Movable desks and tables, separate chairs.
5. A floor on which children can safely sit.
6. A work bench with tools appropriate for children.
7. A place where several children can paint at a time.
8. Wall space for many maps.
9. Bulletin board for children to use.
10. Electric outlets for radio, victrola, and a small stove.
11. A sink with running water.
12. A place where children can use and care for clay.
13. A portable kiln.
14. A moving picture projector.[33]

These items as listed describe the type of education that is very desirable, especially in light of educating the whole child.

Summary. Much of the literature in this field deals with standards. The actual problems brought about by the lack of these standards are hard to locate. However, most of the literature carries the idea that schools must consider all children, and the whole child, and to do this, standards must be elevated.

There is a definite trend toward the elevation of standards, the offering of equal opportunity, and the

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[33] Ibid., p. 63.

public's demanding a share of the school time.

Authorities, such as Dr. Charles Bursch, believe that the schools should be child-centered.

Many writers in this field feel that the schools must be planned around the curriculum, not the reverse. For this reason, old schools that are not changeable, old schools with their rigid physical facilities, face a definite problem in offering an adequate program.

The growth of the elementary program in the past quarter century demands that a greater amount of physical facilities be used. Educators must become more conscious of these facilities.

CHAPTER III

STANDARDS FOR ELEMENTARY SCHOOLS

Introduction. A school building is the home of children for two and one-half to six hours each day. To serve the purposes of educating the child and housing him in a home-like atmosphere requires standards of very high quality. These standards must be rigid in regard to health and safety, yet they must also be flexible in regard to the program and activities presented. A school building can be a place of beauty or a dull, drab, monotonous place in which a process takes place. The manner in which this process takes place can be enhanced a great deal by the surroundings. A school that has bright and cheerful surroundings with conveniences that increase the ease of teaching and learning is far better than a school that is merely four walls and called a school. This chapter, therefore, sets forth desirable standards for elementary schools.

Site. The size of the school site should be five acres as a minimum. "The following site areas are suggested as minimum: (a) For elementary schools, five acres plus an additional acre for each one hundred pupils

of ultimate enrolment."[34]

Size and Type. Elementary schools should be constructed so as to house at least 175 pupils. It is considered that the minimum number of pupils that can be served efficiently, given a full program, and offered a full chance to gain all the experiences necessary for growth is the above number. "Many schools, especially in rural areas, have been too small to provide a balanced and diversified curriculum. It seems clear that elementary schools of 175 pupils or more are desirable."[35]

The National Commission on School District Reorganization feels that children will be served better if:

> The enrolment in the kindergarten and Grades 1 to 6 is not fewer than 175 pupils with at least 7 full-time teachers employed, a more desirable minimum being 300 or more pupils with 12 or more teachers.[36]

The type of construction varies with the ability of the school district to pay. A Type A building would

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[34] Twenty-seventh Yearbook, op. cit., p. 75.

[35] Ibid., p. 47.

[36] Ibid., p. 48.

be desirable in most cases; however, the cost is prohibitive to many small school districts. A definition of Type A follows:

> Type A: A building constructed entirely of fire resistive materials, including its roof, windows, doors, floors, and finish.[37]

Since Type A construction is prohibitive to impoverished districts, adequate attention, however, can be given to other types of construction to see that they meet safety and educational requirements.

Attractiveness. The beauty of a building is an intangible thing that many seem to ignore because of tradition. "Elementary school architecture has advanced more in the past four years than it has in the previous forty."[38] Because of this, attractiveness has become a large part in school house construction. Modern development at the World Fairs and design of theatres and office buildings have put a premium on beauty.

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[37] Ibid., p. 168.

[38] Lawrence E. Perkins, "An Analysis of Schools Designed by a Chicago Firm," The School Executive, 69:68, March, 1950.

"The entire school plant should be cheerful, attractive, and pleasing."[39] In a modern world, four brick walls with a belfry can hardly be considered attractive and pleasing.

"The landscaping should be in keeping with the school building itself and coordinate, as far as possible, with the efforts of various agencies in developing the artistic features of the community."[40]

Sidewalks are necessary here in California to insure dry feet for pupils and to help keep the buildings free of mud in the winter time. Custodians are firm believers in plenty of sidewalk area. "Sidewalks should be of ample width and separated from streets and driveways by a generous strip of lawn. Such walks should be direct and placed wherever needed."[41]

Heating and Ventilation. "The heating system should

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[39] Twenty-seventh Yearbook, op. cit., p. 86.

[40] N. L. Engelhardt, Standards for Junior High School Buildings (New York: Bureau of Publications, Teachers College, Columbia University, 1932), p. 19.

[41] Ibid., p. 19.

be as simple as possible and easy to operate."[42] In the geographical area in which this survey was taken, heating does not present a large problem. A simple system makes it possible for unskilled people to operate the heating system successfully. To a large degree, the financial condition of the district will determine the type of system. "Room-fired heaters are not to be encouraged."[43] This would make it seem that a district, even though financially weak, should not try to save money on room-fired heaters. Automatic controls are desirable.

Ventilation of the classroom is very important, as much so in hot weather as in cold. Forced ventilating systems are expensive. Most reasonable in cost is described as follows:

> The simple gravity system is one with fresh air introduced thru windows or wall openings, with ventilating ducts to exhaust the stale air by gravity, preferably aided by propeller vent heads, out thru the roof.[44]

Another type that takes no expense whatsoever, in so far as installation of propellers, is the type that

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[42] Twenty-seventh Yearbook, op. cit., p. 154.

[43] Ibid., p. 154.

[44] Ibid., p. 154.

uses window intakes and exhaust ducts. This system works well when the difference between inside and outside temperature is enough to set up a gravitational flow. "A simple type of ventilation with window air intakes and gravity exhaust ducts has grown in favor."[45]

Standards of Illumination. Lighting standards for various areas in the school are different. However, in the classroom where classroom work is done, the Illuminating Engineering Society gives the specifications that classrooms, including libraries, shops, and lecture rooms should have thirty footcandles in all work areas.

> Lighting intensities recommended by the Illuminating Engineering Society are that classrooms, including libraries, shops, lecture rooms, and laboratories should have thirty footcandles maintained in service.[46]

The reflection factors in these rooms is important. "Different types of lights will give different qualities to the same color; thus it is important to select colors under the light to which they are to be subjected."[47] The

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[45] Ibid., p. 149.

[46] Ibid., p. 224.

[47] Ibid., p. 239.

lighting used will largely determine the color scheme.

The type of illumination used will depend upon the amount of money that the district has to spend for school buildings. Natural lighting aids to a great degree in bringing up the level of artificial light. "No bare lamps should be allowed in a person's normal visual field."[48] This eliminates direct lighting. "Fluorescent lamps give off twice as much light for amount of current as do incandescent lamps."[49] Also, the light given off is cooler and softer. Incandescent lighting gives a high spot brightness, thus eliminating it as desirable. In the overall picture, fluorescent lighting seems to be desirable because of the low operating cost, cooler light, softer light, and because of its ability to bring up the illumination level. Fluorescent lighting linked with good natural lighting will serve the classroom well.

Fenestration. Daylight for schools is very important.

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[48] Ibid., p. 243.

[49] Ibid., p. 235.

The windows in a classroom let in this daylight. The area of window space should be equal to 20 per cent of the floor area. This is an old standard and holds true today.

> The typical plan for schoolroom fenestration has been a bank of windows on one side wall of the classroom. Only a small percent of the light entering the windows ever reaches the inner side of the room. When it was presupposed that there would be little or no artificial light in the classroom, standards were developed to the effect that the room should not be wider than twice the effective height of the windows. Rooms wider than this standard are now being built, but there is still good sense in the standard that the window area should equal at least twenty percent of the floor area, with the glass running up to within six inches of the ceiling, (closer if possible) since the greater part of the useful light that enters a room comes from the upper part of the windows.[50]

Unilateral lighting is no longer considered the standard. "It has been found that bilateral lighting tends to distribute more evenly the natural light coming into a room."[51]

Shades are necessary to control the light entering the room. "Shades should be of a light-colored translucent

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[50] Ibid., p. 226.

[51] Ibid., p. 228.

material."[52] They should never be opaque. "These shades should be mounted at the mid-point of the windows in order to provide separate control of both the upper and lower half."[53]

Cafeterias. A cafeteria in a school offers chances for health education. As a result, they should be included, for certainly health education is important.

> The cafeteria plan should include lunch room, kitchen, storage room, serving room, dish-washing area, locker rooms, lavatories for the workers, and a faculty dining room.[54]

These standards are quite stringent. A majority of small schools cannot meet these requirements. A kitchen, with a good serving area, a well-heated, ventilated, and attractive lunchroom would meet the needs of most small schools. There are, however, minimum standards. They are as follows:

> 1. School lunchroom or cafeteria should be on first floor and accessible to a service driveway.
> 2. Approximately ten square feet per person should be allowed in the dining area for the largest lunch shift.[55]

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[52] Ibid., p. 232.

[53] Loc. cit.

[54] Englehardt, op. cit., p. 139.

[55] Twenty-seventh Yearbook, op. cit., p. 121.

Basic equipment will be according to the local districts.

Toilet Facilities. The sanitation facilities of a school are very important. "Toilet rooms should have a minimum width of ten feet."[56] The toilets should be separated by partitions. "Toilet partitions should be of an impervious material."[57] Floors, as well as partitions must be well kept, and made of an impervious type material. "Floors must be of impervious material."[58]

The toilet rooms must be well-ventilated. "Positive ventilation with segregated ducts is essential for toilet rooms."[59] Sunlight is a germ-killing and an odor-killing agent. It is very desirable to have large amounts of natural light (sunlight) in the toilet rooms. Along with this, there must also be adequate artificial illumination. "Mirrors, with shelves below, should be provided, but not over the wash basins."[60]

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[56] Ibid., p. 162.

[57] Loc. cit.

[58] Ibid., p. 162.

[59] Ibid., p. 162.

[60] Ibid., p. 162.

> For pupil toilet rooms, the following ratio of water-closet fixtures to pupils should be considered minimum (at least two water closets should be installed in each general toilet room):
>
> Girls ..... one fixture to 30
> Boys ..... one fixture to 60
>
> Individual urinals of the floor type should be provided in the ratio of one to each thirty boys using the boys' toilet rooms. They should be so installed as to minimize sharp angles and to facilitate cleaning.[61]

Wash Basins. Too often wash basins are overlooked in planning, and are considered as extra.

> Lavatories or wash basins should be provided in each toilet room in the ratio of one fixture to each fifty pupils. They should be so placed that students will pass them leaving the toilet room. Both hot and cold water should be provided thru one spigot.[62]

Paper towels, toilet paper, and liquid soap need to be provided in metal boxes, sanitary dispensers, and in convenient locations.

Drinking Fountains. "Drinking fountains in classrooms are generally considered desirable."[63] A minimum of one drinking fountain to each seventy-five children in

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61 Ibid., p. 163.

62 Loc. cit.

63 Ibid., p. 164.

attendance is likewise considered desirable. Drinking fountains should be in the corridors and on the playground. In no instance should they be located in toilet rooms or attached to lavatories or sinks. "Drinking fountains should not be located in toilet rooms or attached to lavatories or sinks. Frost-proof fountains are desirable on the playground."[64]

Safety Factors. Schools should be free from hazards that would make the schools unsafe for children and adults to use the school facilities. Hazards and natural barriers should be eliminated. Nearly all parts of the school have safety factors that could make the school hazardous if the utmost care is not used in construction. Generally, it can be said that:

> The environment of every school should provide to the greatest possible degree: (a) safe and healthful conditions for the pupils and teachers while on the school grounds, in the building, and in the immediate neighborhood of the school; (b) freedom from disturbing noises such as those resulting from heavy truck, automobile, railway, and airplane traffic, and by fire sirens and factory whistles; (c) freedom from obnoxious odors; and (d) surroundings pleasing to the eye, that will tend to create a feeling of pride, happiness, and contentment.[65]

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[64] Ibid., p. 164.

[65] Ibid., p. 74.

Community Center Activities. The school and community need to work together. When erecting a school building or in rehabilitating an old one, such things must be given consideration. "Another important trend to which careful consideration must be given is the increase in the use of the school as a community building."[66]

Classrooms. The heart of the school is the classroom. The size of such a place is important. Most elementary specialists now hold that a modern elementary school program requires approximately thirty square feet per pupil, exclusive of storage and accessory spaces."[67]

The lack of size cuts back the program. The storage of materials in the classroom is necessary. Standards suggest that such space should be provided. "In all elementary classrooms, ample storage cabinets are essential for general teaching supplies and for individual pupil materials."[68]

> Approximately 16 to 20 linear feet of chalkboard should be provided for the use of pupils and teacher. Electric outlets and other provisions should be

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[66] Ibid., p. 18.

[67] Ibid., p. 88.

[68] Ibid., p. 90.

> available for use of radio, recordings, picture projection, television, and other audio-visual aids.[69]

Desks. The desks in a classroom are an integral part of the educational process. The desks should be sturdy, serviceable, and pleasing to the eye. They should be of such a nature that the boys and girls using them can move them about. Desks should be adjustable. They should grow with the children. "The best educational thinking points to a strong preference for movable furniture. Where old desks are adjustable, full use should be made of this feature."[70]

Playground Facilities. The natural area for children to use for their physical activity and physical exuberance is the playground. A good playground meets the needs of more than one group within the community.

Summary. It is obvious that desirable standards are necessary to build functional buildings, buildings that will meet the needs of the growing child. The

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[69] Ibid., p. 92.

[70] Ibid., p. 250.

following are minimum standards:

1. Size of site should be five acres.

2. Desirable enrolment -- 175.

3. Type of construction depends upon money available, but should not be of type that is unsafe.

4. Building must be attractive.

5. Room-fired heaters are not desirable. Heating should be from a central plant.

6. Forced ventilation is desirable. Gravity flow types are acceptable.

7. Illumination standards set thirty foot candles as the minimum standard for classroom illumination.

8. Bilateral lighting is considered highly important.

9. Cafeterias are needed. Ten feet per person for dining area is the standard.

10. Toilet rooms should be constructed with floors and walls of impervious materials. There should be one fixture to each thirty girls and one fixture for each sixty boys in attendance. One urinal should be provided for each thirty boys.

11. Wash basins should be provided at the ratio of one to each fifty pupils.

12. Hot and cold water should be provided.

13. Drinking fountains should be provided at one to each seventy-five pupils.

14. The school environment should be safe.

15. Schools should not be erected on or near busy highways and traveled roads.

16. The school should be constructed with the community in mind, thus insuring the community that it will be able to share in the facilities.

17. Classrooms should provide a minimum of thirty square feet per child.

18. Desks should be light, strong, movable, and adjustable.

19. Playground facilities should be safe, well-planned, and provide for a variety of activities.

CHAPTER IV

PROBLEMS PRESENTED BY RURAL SCHOOL BUILDINGS IN SAN JOAQUIN COUNTY

Size of Buildings. One of the problems presented by the buildings and facilities was the lack of size of the buildings to fit the needs of the school program. Crowded conditions are quite prevalent in California. Carrying on an approved educational program, one in which the whole child takes part, requires a school of sufficient size to take care of all the children of school age that live in the school district plus those expected transferees to the area.

Nine schools reported that they had less than the minimum thirty square feet per child that has been established by school authorities. "Most elementary specialists now hold that a modern elementary school program requires approximately thirty square feet per pupil, exclusive of storage and accessory spaces."[71]

"Equality and educational opportunity are not necessarily synonymous terms."[72] A school may treat all

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[71] Ibid., p. 88.

[72] Hollis L. Caswell and Doak S. Campbell, Curriculum Development (New York: American Book Co., 1935), p. 34.

children equally, but in relation to educational opportunity, the children in a given school may not be given the same chances as those in another school of newer and better design. Thus it is recognized that equality of opportunity is not provided when children must attend a school that does not provide even minimum space in which they are to work.

Attractiveness of the Building. The problem of attractiveness is important in plans for the erection of a school building. Eight schools who reported believed by modern standards their buildings were not attractive. Pride of ownership seems to make it mandatory that that which one owns should be pleasing to the eye.

> No one with eyes to see, least of all no young person, can be in the presence of noble buildings without being affected by them. An environment that satisfies the love for the beautiful, which nearly everyone possesses, engenders civic spirit.[73]

Little need be said to make the preceding quotation stand out. The quotation that follows seems to say something different in that it takes school housing beyond the

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73 Strayer, Standards for Elementary School Buildings, op. cit., p. 26.

realm of theory into realm of reality.

> A typical school is an ugly brick structure that looks like an institution for the feeble-minded. Inside are drab, dull corridors from which lead a series of cheese-box rooms of identical shape and size. At least two walls are covered with blackboard on which there is years of accumulated chalk dust. One side would have tall, narrow windows, usually needing badly to be washed, and a cloak room on the other side. Most school buildings in this country are down-right bad.[74]

However, the movement seems to be an enlightened one in that more inviting school grounds and buildings are being constructed, but far too many of the above still exist with little promise for an immediate alleviation of the problem.

According to the administrators of the selected schools, eleven of the schools were in need of paint and repair. Eleven also felt that the surrounding yard was not pleasing to the eye of the student and the community in general. A monotonous arrangement of facilities, with the drabness that goes with such facilities, does not lend itself to the feeling of creativity that a modern

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[74] Wilbur A. Yauch, How Good is Your School (New York: Harper Bros., Publishers, 1951), p. 15.

school program should have.

Safety Factors. One of the outstanding problems in organizing the school program was that of safety hazards confronting many of the schools. Thirteen schools were located on busy, traveled highways. "Whenever a community undertakes the task of educating its children, it assumes a responsibility not only for the intellectual growth of these children, but also for their general well-being."[75] A child's well-being is being endangered when rapidly moving traffic runs near or directly by the place in which he spends from four to six hours each day for a good period of his life. The following is a quotation from the returned questionnaire of the Four Trees School.

> We have no safety zone for children dismounting from cars. Cars drive into our yard to load and unload. There are no cross walks to warn traffic to slow down for a school. The cars pass at a terrific speed.

According to the best authorities, school houses should not be located upon major traffic arteries.

> Nearness to such things as railroads, most factories, dangerous bodies of water, highways

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[75] Strayer, Standards for Elementary School Buildings, op. cit., p. 23.

> with such traffic, noise, dust, bad odors, etc., should be avoided.[76]

The school just referred to was rebuilt in 1949. Problems such as these cannot be eliminated unless there is a desire to do so.

Other problems presented by the lack of safety facilities were lack of handrails and panic locks. Handrails on all stairs of three or more steps were absent. The state uniform building code for school buildings requires that such precautions be taken.

> An exit door from any Group A occupancy if provided with a latch, shall be provided with a panic bar if the exit door serves an occupant load of more than 50.[77]

"Stairways shall have handrails on each side."[78] A problem like these can become serious if a liability suit should be forth-coming. A principal or teacher, who has knowledge of such a problem as this, and has not done something about it or cannot get something done, works under a severe handicap. Ignorance of the law is of no consequence in a legal issue.

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[76] Ward G. Reeder, The Fundamentals of Public School Administration (New York: The Macmillan Company, 1941), p. 260.

[77] Pacific Coast Building Official Conference, Uniform Building Code (Los Angeles: Building Official Conference, 1949), p. 203.

[78] Ibid., p. 199.

Seven of the schools did not have handrails on stairs of three or more steps. Ten schools did not have panic locks on exit doors. The earthquake law of California definitely states that such locks must be used. Such a thing as this could leave the school open to criticism by the general public which never provides the profession with publicity that is of the most advantageous type. "The health and safety of the child in the lonely rural school is just as important as the safety of the child in the magnificent schools of the metropolitan centers."[79]

The Heating and Ventilation. The problem presented by heating and ventilation is another of the problems that was brought forth. Heating in ten schools was not from a central plant. "Room-fired heaters are not to be encouraged."[80] It is understandable that room-fired heaters would be prevalent when recognition is given to the ages of the various buildings. Also, California is an area of

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[79] Strayer, Standards for Elementary School Buildings, op. cit., p. 23.

[80] Twenty-seventh Yearbook, op. cit., p. 154.

Mediterranean type climate that does not very often face extreme temperature changes. However, in the best interest of children and adults, healthfully speaking, heating should be from a central system with controls for the system located in each room. In this manner, the individual room can be controlled. In the elementary school, with its activity program, the room temperature would have to be controlled so as to meet the change in program. "Desirable temperature ranges vary with the activity in, and the location of, the space to be heated."[81]

The main problem presented by heating was the fire hazard presented by the various heating systems. Six schools reported that the heating system was not constructed so as to eliminate the possibility of a fire. This seems to be one of the main reasons for not having room-fired heaters. Too often it is so difficult to insulate such heaters amply from surrounding combustible materials that it is either not done or done so poorly that none would seem to be better. A heating system that does not give the utmost in safety should not be used in a public school.

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81 Ibid., p. 147.

Ventilation, another hindrance to the educational program, can be traced to the heating system, for in many cases they are joined together. In eight schools ventilation was done only by adjusting the windows. This cannot properly be done unless there is some form of suction, either by fan or by construction of gravity type exhaust ducts. Fans in the exhaust ducts are desirable. The natural flow of air, if the ventilation system is properly constructed, will ventilate most school rooms. However, an adjustment of windows up and down will not provide for the proper ventilation.

Air intakes at windows should deflect the air so that no child is ever subjected to drafts. The costs of mechanically-controlled ventilation runs quite high, but is very advantageous in even the small school. This is particularly true here in California on those long, warm spring days when the temperature rises into the high eighties and nineties, and with the rise in temperature, classroom problems increase. Ventilating standards suggest that there be at least two air changes per hour in classrooms housing thirty pupils. Also, the peat dust in this area demands that some type of air cleaning facilities be supplied.

In the last few years, much emphasis has been put on the ventilation and air conditiong of homes and offices, yet school people seem to be unconscious of the fact that school house ventilation is very important. "Air movement within the room is vital to the comfort of the occupants."[82]

Lighting. Lighting and color of the whole school plant is one of the most controversial and most talked about things in school house planning. "In the last few years this emphasis has become so great that some educators say other things are being overlooked in the enthusiastic attention to better lighting."[83] This seems to be somewhat absurd when consideration is given to the fact that so much of the work done in a classroom depends upon keen visual acuity. The important thing to remember is that the work done with the eye is not done with that organ alone. The eye is a complex mechanism and as a result, what affects it, affects the whole body, nerves, muscles, circulation. Thus, if the eye is at ease, then the whole body is also at ease and as a result, less fatigue results. Tests have proven that when lighting is poor, poor work is often the result. In a very short time, under poor lighting conditions, poor

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[82] Ibid., p. 149.

[83] Ibid., p. 217.

work is always the end result.

> If there are handicaps to good seeing, such as glare, dim light, defective eyes, type too small for reading, or not enough time, the job of seeing leads to muscular and nervous tensions and an added burden of fatigue.[84]

A serious problem presented by ten of the schools was poor lighting in each classroom. A minimum of thirty footcandles in all parts of the classroom is the standard set forth by the Illuminating Engineering Society of America. This does not take into consideration other areas in the school. Thirty footcandles would not be required in gymnasiums, halls, auditoriums, cafeterias, etc. But in giving consideration to these schools, classrooms are usually all that are present.

Along with the lighting the color schemes become important. If they are too dark, then the brightness difference becomes too high. As a result, what lighting there is becomes ineffective. Fourteen of the schools reported that the color of the walls was sufficiently light in color to reflect light. The problem is lack of enough

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[84] Ibid., p. 217.

light. Under the accepted educational program it is desirable that each child be given the chance to reach his greatest potentialities. Under present conditions, poor lighting would certainly impede the educational progress of any child, and any part of the educational system that permits a child to be denied full rights to extend himself to his fullest capabilities, should be eliminated immediately.

> The state wants every single one of its citizens developed to his highest point and so does the individual want of education the development of every potential power within him, every talent, every ability.[85]

Fenestration. Looking through many schools throughout the nation, one would be apt to find that until recent years much of the light in the classrooms was furnished by natural light, with one or two light globes hanging from the ceiling to allow for some much-needed illumination on the darkest days. This type of lighting is difficult to control, due to varying factors of weather and seasonal changes. The local weather conditions actually control this type of lighting of classrooms. The original standard suggested that the window area should be at least twenty percent of the floor area. This still holds true. However,

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85 Ione Swan, "Editorial," National Elementary Principal, 27:9, October, 1947.

the old idea that windows should extend along only one side of the classroom is a fallacy. This one-sided window standard was brought about by the type of educational program that was in effect at that time. The formal program, with rows of screwed-down seats and book learning program, suggested that all light must come over the left shoulder. The only error in this assumption was that the children in the back of the room faced the light.

> The plant, above all, must be cheerful, inviting, stimulating: it must provide an environment for learning, working, and living that makes for richness of experience in such positive terms that the impressionable years of a child's life will receive lasting influence for good.[86]

A plant that is not adequately lighted cannot do such a job as this.

> Newer kinds of window lighting are being developed, however. The modern school program calls for movable furniture and many varied activities. Instead of one-sided lighting there are various plans for providing a diffused all-over illumination thru bilateral or multilateral lighting, supplemented as needed by artificial light. It is not necessary to have lighting come only over the left shoulder if there is a proper brightness balance within the room and no glare or direct sunlight within the field of vision.[87]

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[86] Charles W. Bursch and John Reid, You Want To Build A School (New York: Reinhold Pub. Corp., 1947), p. 28.

[87] Twenty-seventh Yearbook, op. cit., p. 227.

It has been found that bilateral lighting gives a better and more even light by which children and adults can accomplish their tasks. Ten of the schools under consideration have windows down one side of the classroom. This in itself is not such a great problem, for it can be properly handled if lighting controls can be obtained.

The main means of controlling natural light through windows is by the use of shades. The shades should be of a double type, mounted in the middle, one shade for the top half of the window and one shade for the bottom half. The shades should overlap in the middle to prevent a crack of glaring light to sweep across the classroom. The shades should never be opaque, but be of translucent material which enables the light to diffuse across the room. With the exception of two schools, this type of light control was not provided. Irregardless of how good the natural light might be, in a climate such as this, with so much sunlight, it would be difficult, to say the least, to control it properly without shades.

Cafeterias and Lunch Room Facilities. Nutritional experts have been haranguing the American public about their eating habits. Steps can be taken toward correcting that problem; intelligent steps that will solve it in an

acceptable manner. One sure way of attacking the problem is through the schools. "Kitchens and lunchrooms are needed in both elementary and high schools."[88]

The survey showed that approximately 85 percent, or fourteen of them, lacked cafeterias and lunchroom facilities. This shows a definite lack of planning. The hot lunch program is not a new idea. The Julius Rosenwald Foundation, which provided for the rebuilding of many schools in the southern states, would not approve the plans for a building unless a cafeteria was in the plans. This foundation had its inception in 1920.

> Communities erecting one-teacher schoolhouse with Rosenwald plans obtained a building with a regular classroom and a smaller "community room". This foresighted policy anticipated community needs. The fact that this space is now available for community club rooms, for federally aided hot lunch programs, for health rooms, for indoor play areas, and the like, is a result of vision in projecting educational programs on a regional scale.[89]

Today, with the Federal school-lunch program in operation, the schools have a basis on which they may begin operation. The use to which this program is put

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[88] Ibid., p. 17.

[89] Ibid., p. 47.

is based entirely on the ingenuity which the school and school district can use in administering it.

"The lunch period is an important part of the health program."[90] In rural areas, the main meal is usually the noon meal. The great number of children that eat their lunches at school miss out on this main meal. Perhaps this is not as true today as it was in the past, but it is still prevalent enough to warrant serious consideration. Many teachers fail to realize the great importance of the noon meal. It is a time when children fortify themselves after a long morning with the necessary nourishment for an equally long afternoon.

Another point to consider is the fact that a cafeteria with its lunch program can offer opportunities for truly effective learning situations that can be obtained in no other way. Manners, ways to prepare food, responsibility in preparing food, nutrition, and other learnings can be had by letting the children actively participate in such a program.

> The school cafeteria offers opportunity for education in food selection and proper eating habits. Health instruction in the cafeteria should be correlated with the health instruction

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[90] Ernest Hilton, Rural School Management (New York: American Book Company, 1949), p. 144.

> of the other educational departments. The noon lunch period offers an excellent opportunity for social education.[91]

The lack of a lunch program, or the lack of an adequate lunch program, is a serious problem to the promotion of a school program that meets the needs of the children in the schools under consideration. It is generally agreed that a hot lunch should be provided for each child in school. "All children attending school have the same basic needs -- among them a noontime meal, preferably a hot one."[92]

Toilet Facilities. In no case did any school in question have outdoor or chemical type toilets. However, one school faced the problem of having the toilet facilities removed from the building, causing trouble and inconvenience in wet weather. Three schools felt that it was difficult for them to keep the toilet rooms clean. Eight schools stated that the width of the toilet rooms was less than the standard ten feet.

The question of cleanliness in regard to these

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[91] N. L. Engelhardt, Standards for Junior High School Buildings (New York: Bureau of Publications, Teachers College, Columbia University, 1932), p. 139.

[92] Orlan C. Fowler, "The Hot Lunch Program," The National Elementary Principal, 27:2, December, 1947.

facilities cannot be considered lightly. In regard to this, the toilet facilities are an "either-or" proposition. It is inexcusable to have toilet rooms that are substandard. One school had fewer than the required one water closet for each thirty girls and one water closet for each sixty boys. In addition to this, there must be one urinal for each thirty boys in attendance.

This questionnaire precluded additional facilities for public use at community programs, teachers' facilities, and a separate toilet for primary children, located in the primary room. However, these were not considered absolutely essential. Neither were any specific types considered to be the requirement.

Wash Basins and Drinking Fountains. A problem was found in this case in that six schools under consideration lacked wash basins in sufficient number to meet even minimum requirements. One of the first requirements in a good health program is to stress the necessity for washing one's hands before meals and after taking care of one's needs at the lavatory. This is a basic health rule that cannot be denied. If this rule of health is to be stressed continually, then facilities must be provided to make this rule easy to follow. It is difficult for children to stand

in line to wait for anything, especially such a distasteful job as washing the hands. Also, if washing the hands after visiting the lavatory is to become ingrained in the child's habit pattern, then facilities must be provided to make this easy. One way that this can be done is to provide more than enough wash basins at the entrance of the toilet rooms and in each classroom to take care of the pupils in attendance. These basins should be placed in such a manner that the children pass them as they leave the lavatory and in an accessible place in the rooms. Only two schools provided hot water. School housing planners feel very strongly that hot and cold water should be provided in the schools. The Twenty-seventh Year Book of the American Association of School Administrators says that "both hot and cold water should be provided through one spigot."[93] This lends even more weight when the health books that are used in every day teaching are looked into and critically analyzed.

> This is the way I wash my hands. I see that the washbowl is clean, and then I put clean, warm water in it. I wet my hands with

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[93] Twenty-seventh Yearbook, on. cit., p. 163.

warm water, then rub them with soap.[94]

It is desirable and helpful to have both hot and cold water when washing and bathing.[95]

Here is seen the difference between what is taught and the actual practice in the schools. The health of children is vitally important. Such a problem as that presented by the lack of health facilities places a burden upon the teacher and the child in carrying out the aims and ideals of a well-integrated educational program.

Drinking fountains, or the lack of same, constituted another problem. Four schools reported that they were not provided with clean drinking fountains. There should be a minimum of one drinking fountain on each floor and one for each seventy-five pupils. These should be of a type that can easily be cleaned and maintained. Extra fountains should be provided in strategic areas, such as halls, playground, and in classrooms. Children need water continually, and less disruption is had when a child can easily and naturally obtain a drink in surroundings in which he lives

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[94] California State Series, The American Health Series IV (Sacramento, California: State Department of Education, 1943), p. 37.

[95] California State Series, The American Health Series VI (Sacramento, California: State Department of Education, 1943), p. 164.

and works.

Hindrances such as these are not of significant degree to warrant revolutionary changes, but still plague the school program.

Community Center Activities. The United States is a democracy and as such has institutions that carry on this concept of government. If a stranger were to ask and wonder about the meaning of democracy, that stranger should need only be directed to the nearest school. For there should be found all the basic elements of democratic living. This is the reason for covering this topic, Community Center Activities, in this study. The school is created by and for the use of the community. The very center of the community should be the school. The gap that has widened between the school and community must be rebridged with a concerted effort to make the school what it should be, community-centered.

> Another important trend to which careful consideration must be given is the increase in the use of the school as a community building. This is a revival in modern America of the community function that the "little red schoolhouse" served in pioneer rural America.[96]

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96 Twenty-seventh Yearbook, op. cit., p. 18.

Since this trend is here, it must be met and successfully carried on.

The school depends upon the community for its success. It is an established fact that the school that serves the community well is the school that has little difficulty in meeting its yearly budget, and usually can get the things it needs for its operation. Nine of the schools surveyed felt that their space for community activities was inadequate. Ten of the group lacked auditoriums. Thirteen of the group used classrooms as auditoriums. This does not include the lack of space for extra-curricular activities such as Girl and Boy Scouts, Campfire Girls and Bluebirds, Brownies, Four H and Future Farm Groups, folk-dance groups, and other activities that would be allied to these.

One of the surest ways for the community to become acquainted with the school program is to watch it in action. School programs at special seasons and holidays is one of the easiest ways for the school to meet and gain acceptance of the public. This, however, cannot be done when the space and facilities are lacking.

Along with this lack of space is the problem of lighting, parking, and other problems mentioned before.

In many districts the school is the only common ground upon which people can meet for educational, cultural, and recreational activities. It is with these things in mind that serious consideration must be given to any hindrance such as lack of community center activity space, and to the realization that it is serious enough to cause the overall program to be a failure in meeting the needs of education in a democracy.

> The trend is to recognize more fully that the schools belong to the community and are a community investment and enterprise, and that the buildings, grounds, and equipment of the schools should be made available to the public as far as possible without conflicting with the educational program.[97]

Educational Facilities.

> A classroom that is suitable has much more than good lighting, desks, and a blackboard. We know that children learn best through practical application of facts. To so learn, however, requires the presence of working facilities. The classroom becomes, in effect, a laboratory -- a laboratory having work and display counters, a sink, cupboards, and cases for tools, supplies, files for such materials.[98]

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[97] H. L. Smith, op. cit., p. 32.

[98] Stoneman, op. cit., p. 26.

Twelve of the schools reported that there was a definite lack of storage space, work counters, sinks, hot water, and drinking fountains. The children, in an adequate program need materials such as these.

Perhaps the space and equipment that is so desirable can be considered as extravagant. In this day when millions are spent for arms, it does not seem too much to expect that the coming generation should get the most that can be offered in order to prepare them in such a manner that they will be better able to cope with the problems that will beset them. The traditional program is not enough. Nor can the facilities needed for a traditional program be considered adequate. "Instruction at the elementary level may emphasize the activity program in teaching which requires more space and special equipment than the more traditional program of book and desk work.[99]

Eleven of the schools contacted lacked means for darkening the classrooms for audio-visual instruction. It has been estimated that approximately eighty-five percent of our experience is gained through the eyes. Also, a great number of people are what might be termed as "eye-minded." Certainly, in this modern era, when movies and television

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[99] Bursch, op. cit., p. 59.

are commonplace in everyday living, these should not be treated as extra-ordinary in the schools. The motion picture is useful in the classroom because it brings the past to the present, the present into the future; it brings far-away places near. Children are able to do the next best thing, that is, to see and experience by means of motion and sound. It would be much better to visit and have the actual experiences, but this is beyond the realm of possibility. All rooms should be equipped with darkening facilities and outlets for electrical connections. Auditorium usage of films is not advisable. The classroom, the center of learning, should be the place to use this type of educational aid. A lack in the school facilities, such as this, is a serious obstacle.

Special Instructional Facilities. Under this topic the following will be listed and reported upon.

1. Kindergarten
2. Library
3. Home Economics Room
4. Industrial Arts Room
5. Art Room
6. Science Room

7. Music Room
8. Audio-visual Room
9. Indoor Play or Multi-purpose Room

Kindergarten. Two schools of the seventeen have a kindergarten. In California, kindergarten is no longer something that is considered extra, but something that shall be provided.

> The governing board of any school district shall upon the petition of the parents or guardians of twenty-five or more children between the ages of four and one-half and six years, residing within any city, city and county, or school district, establish and maintain a kindergarten.[100]

Most of the school districts under consideration could not meet the above requirements. However, there will be some children in that classification in each district. There should be some way in which their needs could be met.

> If we had to justify our kindergartens to the tax payers, we would perhaps say, first of all, the kindergarten is to socialize the child. But the kindergarten makes a major contribution to learning readiness.[101]

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[100] California State Educational Code (Sacramento: California State Publishing Dept., 1949), Sec. 8401, p. 272.

[101] George N. Reavis, "Reading Program of the Cincinnati Schools," The National Elementary Principal, 27:17, October, 1947.

It would be unfortunate if the thoughts of the public and those of educators should continue in a vein that assumes that kindergarten is something special. Years have been spent in getting parents to accept kindergarten as a regular part of school. It is by means of the kindergarten that children get special introduction to school, an introduction that equips them with better habits, skills, attitudes, and appreciations for the rest of their school life. It is essential, therefore, that a good kindergarten experience should be provided, regardless of the attendance area.

Library. Sixteen of the schools did not have a library. A library program in any school helps the students to do better work as they progress through the grades. A library is not essential as such, but is highly desirable. "The anticipated size of the school and the curricular demands upon the library will determine the rooms and facilities to be provided."[102]

Home Economics Room. The teaching of units of home life is essential in the modern curriculum. None

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[102] Long, op. cit., p. 88.

of the seventeen schools had such a room. "Household education is the rightful heritage of every girl in a democracy."[103] Under our present economic system, where so many mothers are out of the home working to help meet the economic needs of the family, the teaching of such subjects is of the utmost importance. Teaching these adequately requires facilities that are not now present in any of the schools studied. Training useful citizens in the responsibilities that are required of citizenship will require a change in building facilities to meet these needs.

Art Rooms. None of the seventeen schools had such a room. A separate art room is highly recommended by Strayer and Engelhardt[104] on the basis that art work should not only be thoroughly correlated with the classroom work but that art, in its true form, is a means of self-expression, and that under classroom conditions, this is not always easily done. A general atmosphere must be

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103 Engelhardt, Standards for Junior High School Buildings, op. cit., p. 94.

104 Engelhardt, Standards for Elementary School Buildings, op. cit., p. 101.

set, a tone which can be set much better and more easily in a room that houses only art and artistic surroundings. A good art room is very expensive, and it would be impossible to construct such a room in most of these schools. Yet, under the ideals of an accepted program, the individual is considered highly important. Also, each child is to receive his fair share of time, materials, and equipment. It is therefore questionable that schools lacking facilities such as these really meet these requirements.

Industrial Arts Rooms. None of the schools reported such a room. It is desirable that children obtain as much experience in the educational program as is possible. Since California schools are definitely committed to teach all children, not just pre-college students, then the schools must provide all the experiences that can be offered in order that each student might explore to such a degree that his full potentialities might be reached. This is especially true of the seventh and eighth grade children, since much of the industrial arts in the first six grades can be done right in the classroom.

> But each school building for the first six grades should have a room suitably equipped for all kinds of constructive experimental work to which any class may go for kinds of activities

not reasonably possible in grade rooms.[105]

Science Rooms. No schools had such a room. A good science room is always an asset; yet excellent teaching and growth can be made in a regular classroom. Of all the special rooms, this is one that can be considered very desirable but not essential. However, the regular classroom should have all the necessary items of equipment and space to make the room both attractive and useful. The curiosity of children often overcomes obstacles, and the curiosity of children in regard to science is no exception.

Music Rooms. Only one school had a music room. The need for special music rooms is not a pressing one. Regular classrooms can be used to good advantage, and in many instances as well as or even better. However, each room that is used should have a piano, a phonograph, and a radio. The room should be large enough, or have movable desks, so that free rhythmic expression may be part of the program. The lack of space in the schools surveyed and the fact that some still have screwed-down desks make it a problem to carry on a music program.

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105 Ibid., p. 121.

It must be recognized that the absence of a music room precludes an instrumental program. Such a program is definitely needed in every school. To eliminate such a program leaves out part of the child, and the whole child is to be used as a basis for education.

Indoor Play or Multi-purpose Rooms. Four schools were equipped with these rooms. A good play room is quite essential here in California with its rainy winters. On cold mornings it is good to have a shelter for children to use while they are waiting for school to begin. These rooms, in California, because of the warm climate, need not be anything other than shelter that allows for scheduled and unscheduled activities in a place that is clean, comfortable, and dry. They need not be elaborate structures that are built to withstand the cold and storm of a midwestern blizzard.

Again, small schools would find it difficult to provide such structures in their budget.

> Asking teachers to put on a good program without adequate tools is like expecting a carpenter to build you a good house with only a hammer and saw to work with.[106]

The schools, however, are building citizens of tomorrow.

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106 Stoneman, op. cit., p. 16.

From a health standpoint it is essential that children get exercise and free play each day. Rooms such as these meet those requirements when inclement weather interrupts the scheduled program.

From the aspect of a community-centered school, such a room is most welcome. Athletic activities, dances, and other functions may be easily carried on where structures like this exist.

Playground Facilities. The playgrounds, except in two cases, were sufficiently large to meet required standards of forty to seventy-five square feet per child. This is a good sign in that room for expansion is possible. In rural school areas it is quite common to find the schools on large sites, which, if they were correctly built and maintained, would provide good play areas for children and adults.

Ten of the schools, however, reported that the playgrounds were not free from rocks, ditches, weeds, and other hazards. Neither were the school grounds level.

> Adequate facilities and equipment are to physical education what apparatus is to laboratories, work benches and tools are to industrial arts, cooking and sewing utensils to home economics, and books and maps are to

the classroom.[107]

From the above quotation it can be seen that the need for physical educational facilities is considered highly important. This is quite true when the state law of California states that physical education shall be an integral part of each elementary school program.

Not only should the playground provide activity space for children, it should also provide space for adult activity. Along with this, the play space should be planned on a year-round basis. This means that surfaced areas should be planned. When a community school is desired, the playground facilities can be one of the main attractions. Adults, as well as children, like to play. A common meeting place, the playground can be of much use in gaining community participation. The use of a playground for this purpose cannot be done unless it is well-planned, attractive, and usable.

From this part of the study it would seem that certain difficulties are definitely present in this area. Such problems are difficult to overcome. Problems brought about by organizational difficulties can be surmounted by

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107 Engelhardt, Standards for Elementary Schools, op. cit., p. 18.

the teacher, but obstacles brought about by lack of physical facilities cannot be dealt with at this level. It would seem that such obstacles as this would make it extremely difficult to provide each child with his full share of experiences.

Playground Apparatus. The following items of playground equipment were present.

Equipment	Number of Schools
Climbing Bars	3
Swings	2
Teeter Boards	3
Merry-Go-Rounds	4
Tether-Balls	5
Giant Strides	2
Slides	5
Horizontal Bars	2

Along with the above list, ten schools possessed basketball goals, and seven schools had baseball backstops.

Some of the above items are of questionable value. Merry-go-rounds and giant strides are questionable because of the safety factors involved. Also, they provide little, if any, real exercise. Along this vein,

swings and teeter-boards provide only small amounts of exercise and often are dangerous. Children swinging out may either fall or kick some other child. Teeter-boards are often just another means for children to fall or be severely bumped. Whenever equipment has little or doubtful value, it should not be installed. The money that is used for such equipment can be used to a better advantage for something else.

Slides, jungle gyms, horizontal bars, and climbing bars are very beneficial, providing good exercise and meeting the needs of small children. These pieces of equipment are excellent and show that schools possessing them are making progress in the right direction.

The activity program is of the utmost importance, and every effort to provide a well-rounded program should be made. The problems presented here are not of a severe nature. Yet in considering the schools individually, many little problems make it difficult for the program to function smoothly and completely adequately.

Summary. The needs of children must be met. The schools exist for that reason, and for that reason alone. In the schools surveyed, no schools met all the minimum standards. The lacks that they presented are evidence that

there are definite problems presented by building and building facilities.

The buildings lacked sufficient space, eye appeal, and in thirteen schools there was evidence that hazardous conditions existed. Heating and ventilation were inadequate; both natural and artificial lighting did not meet minimum standards, and the means of controlling artificial light was absent in thirteen cases.

Cafeterias for hot lunch programs were absent in fourteen schools. Sanitation, as far as toilets are concerned, was adequate, but hot water was not present, except in two cases. The trend toward using the school as a community center was not being met adequately. The classrooms were too small. Adequate facilities were lacking. Special facilities were not present. The kindergarten program was non-existent, except for two schools. Playgrounds were of adequate size, but were rough, lacked enough equipment, and some had equipment of doubtful value.

The above problems were not present in every school, but considering the group as a whole, the problems presented were evently distributed over the group so generalizations such as those preceding can be made.

CHAPTER V

SUMMARY AND CONCLUSIONS

Summary. Throughout this thesis standards have been presented that, though considered as minimum standards, seem ideal in the light of some school house construction. Perhaps in a philosophical vein, the minimum in school house standards can be considered an ideal, for certainly much of our school housing lags far behind the present sociological and physiological needs of American youth.

In making the summary of this study, it has been found that there are many problems presented by the building and building facilities. Some of the problems are severe, while others are minor.

The problem of building size was evident to a large degree. The need for expansion, plus the necessary thirty square feet per pupil was lacking in a large number of cases.

The buildings were not attractive and needed paint and repair. The need for attractiveness is apparent in our everyday existence. The advertisements that scream at people from every angle point toward pride of ownership because of newness and beauty. Schools are part of the

everyday living in a democracy.

An outstanding obstacle to providing a good program was the safety hazards about the school.

Heating and ventilation did not meet standards that are necessary to health and safety. Heating was not from a central plant as is desirable in schools. The lack of central heating necessitated the use of room-fired heaters. Due to difficulty in installing room-fired heaters safely, there is a danger of fire. Ventilation was not provided by automatically controlled equipment.

The illumination in the schools was poor. A minimum of thirty footcandles was not present in all places of the classrooms. Poor lighting causes poor work. It is felt that this is one of the more serious problems.

Window lighting was faced with the problem of proper control. Schools lacked the double shades necessary to control the proper amounts of natural light. The artificial light, not being adequate, was also handicapped by the fact that natural light was not used to the best advantage.

Cafeterias and lunchroom facilities were almost entirely lacking. This seemed to be of the most serious nature. It is felt that each child should be provided with a means of obtaining a hot lunch. Opportunities for

education, community participation, and health activities are lost because of this obstacle. A full program, under the present philosophy education as expressed by the County Curriculum Manual, cannot be provided without such facilities.

Toilet facilities were in most cases adequate. They presented no serious problem.

Wash basins and drinking fountains were not always present in the proper number. Hot water was not provided except in two instances. It is felt that under the present requirements of health teaching, hot water is necessary. Changes such as these do not warrant revolutionary innovations, but do warrant serious consideration under the present curriculum pattern.

Community center activity facilities were almost entirely lacking. The idea of a democracy without active participation in the very basis of that democracy is difficult to reconcile. Children need space for their extra-curricular activities. Space for these was lacking. Educational facilities, outside of the general classrooms, were almost non-existent. Kindergartens were provided in two schools. Under the present state law more kindergarten programs should be provided. Facilities for audio-visual

activities were found missing. With today's new methods of learning, certainly the school's inability to use such methods puts the schools at a serious disadvantage. Children are faced with audio-visual education in many forms each day. The schools should be able to use audio-visual methods in their teaching. A monopoly on this form of education should not be held by commercial groups only.

Playground facilities were poor and lacked proper equipment. Some equipment that was present on the playgrounds was of questionable value, and some could be considered dangerous.

Conclusions. This study has not been so extensive as to draw iron-clad conclusions on each school on each item, but it has been extensive and intensive enough to draw certain general conclusions on the problems that schools with poor facilities face in offering an adequate program.

Many of the selected schools in this study were faced with problems in carrying out the educational program. In some cases it would be difficult to do an adequate job with merely a formal program, let alone in a total program.

1. The schools lacked space.

2. The schools were located in such a manner that

safety hazards were present.

3. Heating and ventilation was poor and the heating system in many instances was not of fire-proof construction.

4. Artificial lighting in the schools was poor and control of natural light was difficult because of lack of proper shades.

5. Cafeterias and lunchroom facilities were almost totally lacking. The hot lunch program, because of this, is non-existent.

6. Toilet facilities were in most cases adequate.

7. Wash basins and drinking fountains were too few in number. Hot water was not provided. This is not consistent with the present California State Health Series.

8. Community center activities were lacking or of insufficient size. This is not in keeping with the present trend in educational thinking.

9. Educational facilities, other than classrooms, were almost entirely absent. Audio-visual activities were curtailed because of lack of darkening materials.

10. Kindergartens were present in only two schools. More kindergarten programs are needed to offer a complete program. Within one school, the problem may not exist, but there will be a few children in each school district that will not be getting the necessary readiness for future

schooling. This is not in keeping with the ideal of equal opportunity for those living in a democracy.

11. Playground facilities were not satisfactory. Some playground equipment was of doubtful value.

From the foregoing study it can be seen that the educational program of the seventeen selected elementary schools is definitely hindered by the lack of building and building facilities. The philosophy of the county in which these schools are located demands that each child be given every chance to reach his full potentialities. Without proper facilities, this is not possible.

CHAPTER VI

RECOMMENDATIONS

Recommendations. From the Summary and Conclusions in this report, it can be definitely seen that there are problems existing in the seventeen schools surveyed. Whether the problems be serious or not, each problem adds to the load of the teacher, administrator, district, and these problems result in sub-standard education for the children in attendance.

Since solving such problems as these are difficult, and since so many of these schools need much help, and since so many of the facilities that seem desirable would cost each district much money, the following recommendations are made.

1. Redistricting would help solve many of the problems. Some of the schools are only two or three miles from other schools of the same type. Today, with school bus travel a safe and economical way of transporting pupils, it seems that many of these schools could consolidate and become large enough to offer a whole program rather than a restricted one.

2. A look into the tax structure in each county should be made by the Board of Equalization to see if the counties are making the proper assessments, bring the

assessments to a maximum, thus insuring each district a maximum tax effort.

3. Aid from the state and federal levels is another recommendation. More school money must be forthcoming. Under the present economic situation, schools are hard-pressed for financial support. The programs offered by these schools are unsatisfactory and responsible people realize it. In maximum effort districts, money from the outside would enable them to make the necessary changes to construct a program that would enable the whole child to develop in a manner that is stimulating and worthwhile.

4. Schools that are financially able should rehabilitate the school plants, giving careful consideration to school house construction standards.

5. New buildings should be constructed. Many schools are too old to rehabilitate. Schools that have a safety problem should make an effort to rebuild in a more desirable location.

6. Illumination, heating, ventilation, and sanitation facilities should be rehabilitated to meet minimum standards.

7. Cafeterias should be constructed, and a hot lunch program should be inaugurated in schools lacking such facilities and program.

8. Schools should be constructed with the community in mind, and community programs should be developed.

9. Educational facilities should be increased. More area per pupil, more special service, more kindergartens, and better playground facilities should be provided.

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A P P E N D I X

QUESTIONNAIRE

Name of School _____

Address of School _____

Grades in School _____

Number of Pupils (A.D.A.) _____

Number of Teachers in School _____

Year School was built _____

Please answer the following questions by a check in the appropriate column.

SIZE OF BUILDING	Yes	No
1. Is the building of sufficient size to accommodate students now attending?	11	6
2. Could you increase your enrolment by twenty-five percent and still have space remaining?	7	10
3. Is there a minimum of thirty square feet per student?	8	9

ATTRACTIVENESS OF BUILDING		
1. Is the building attractive by modern standards?	9	8
2. Does the building need paint and repair?	11	6

		Yes	No
3.	Is the surrounding yard attractive and pleasing to the eye?	6	11
4.	Are there enough sidewalks in the schoolyard to keep the children dry in wet weather?	8	9

HEATING AND VENTILATION

1.	Is the heating adequate at all times?	14	3
2.	Does the heating and ventilating system effect reasonable control of humidity in individual classrooms?	12	5
3.	Is the heating from a central plant?	7	10
4.	Is there a means provided for fresh air to be circulated in the class-rooms?	8	8
5.	Is there an automatic control to regulate heat and ventilation?	11	6
6.	Is the heating system constructed so as to eliminate the possibility of a fire hazard?	11	6

	Yes	No
LIGHTING		
1. Are the walls light enough in color to reflect sufficient light?	14	3
2. Are there at least thirty foot candles of light in all places in each classroom?	7	10
3. Is the lighting of direct type?	10	7
4. Is the lighting of indirect type?	7	7
FENESTRATION		
1. Is the window space of each classroom at least twenty percent of the floor space?	14	3
2. Are the windows on only one side of the classrooms?	10	7
3. Are there windows on both sides of the classrooms?	9	8
4. Are the window sills higher than the eye level of seated pupils?	11	6
5. Do the classrooms have translucent shades?	3	14
6. If there are shades, are they double shades (one for top half and one for bottom half of windows)?	2	13

	Yes	No
7. Are the tops of the windows not less than six inches from the ceilings?	11	6

CAFETERIAS AND LUNCH ROOM FACILITIES

1. Do you have a cafeteria?	3	14
2. Do you have a lunch room?	2	15
3. If you have a cafeteria, is it adequate in that it meets health and sanitation standards?	2	1
4. Are tables and chairs or benches provided in the lunch room	2	4
5. Is the lunch room or cafeteria attractive in decoration and arrangement?	2	1
6. Are your lunch room and cafeteria services meeting the needs of the pupils served?	4	2

TOILET FACILITIES

1. Are the toilet facilities of the indoor flush type?	17	___
2. Are the toilet facilities of the outdoor or chemical type?	___	17

		Yes	No
3.	Is the width of the toilet rooms at least ten feet?	9	8
4.	Are the toilet rooms easy to maintain and keep clean?	14	3
5.	Is there one water closet for each thirty girls?	16	1
6.	Is there one urinal and one water closet for each sixty boys?	16	1

WASH BASINS AND DRINKING FOUNTAINS

1.	Is there one wash basin to each two water closets and urinals?	11	6
2.	Is both hot and cold water provided?	2	17
3.	Are paper towels in dispensers provided?	17	___
4.	Is liquid soap provided?	14	3
5.	Is powder or bar soap provided?	3	___
6.	Is toilet paper provided and protected in clean, sanitary dispensers?	10	7

	Yes	No
7. Are clean drinking fountains provided at the rate of one to each seventy-five students?	13	4

SAFETY FACTORS

1. Are there any unsafe hazards in or about the school?	9	9
2. Is the school located on or near a busy highway or traveled road?	13	4
3. Is there a traffic problem near the school?	7	10
4. Are there any nuisances or noises in, near, or about the school?	2	15
5. Are there any natural hazards that might cause a safety problem (rotten trees, ditches, rivers, lakes, livestock, etc.)?	5	12
6. Are there handrails on all stairs of three or more steps?	10	7
7. Are all the exits equipped with panic locks?	17	10

	Yes	No
8. Is there a well-defined area for parking of automobiles?	9	8
9. Is there a safe loading and unloading zone for school buses and automobiles?	13	4

COMMUNITY CENTER ACTIVITIES

1. Do you have an auditorium in your school?	7	10
2. Do you use classrooms as an auditorium?	13	4
3. Is the auditorium adequate for programs and community meetings?	5	9
4. Do the classrooms meet the need of community meetings and programs?	9	7
5. Is the lighting adequate?	12	5
6. Do you find it difficult to put on special programs because of inadequate building facilities and equipment?	8	9

EDUCATIONAL FACILITIES

Classrooms ---- Size

1. Is there thirty square feet per student?	10	7

	Yes	No
2. Is free work space provided in each classroom?	8	9
3. Is there ample storage space in the classrooms?	5	12
4. Are there work counters in each instructional room?	5	12
5. Are there blackboards on at least two sides of each instructional room?	10	7
6. Is there a drinking fountain in each instructional room?	3	14
7. Is there a wash basin with hot and cold water in each instructional room?	___	17
8. Are there coat racks and shelves for lunches?	12	5
9. Are there electrical outlets in each room?	15	1
10. Can classrooms be darkened for audio-visual activities?	6	11

	Yes	No
DESKS		
1. Are the desks fastened to the floor?	___	17
2. Are the desks adjustable?	13	4
3. Are there movable desks and chairs provided for each child?	13	4
4. Are tables and chairs provided for pupils?	9	7
SPECIAL INSTRUCTIONAL FACILITIES		
1. Does your school have any of the following?		
a. Kindergarten	2	14
b. Library	1	16
c. Home Economics Room	___	17
d. Industrial Arts Room	___	17
e. Art Room	___	17
f. Science Room	___	17
g. Audio-visual Room	___	17
h. Music Room	1	16
i. Indoor Play or Multi-purpose Room	4	13
PLAYGROUND FACILITIES		
1. Is there forty to seventy-five square feet per child on the playground?	15	2
2. Is the playground free from rocks, ditches, weeds, and other play hazards?	7	10
3. Is the playground smooth and level?	6	11

		Yes	No
4.	Is the playground marked with designated areas for various activities?	8	9
5.	Is a special play area provided for smaller children?	11	6
6.	Does the playground have any of the following apparatus?		
	a. Climbing Bars	7	9
	b. Jungle Gyms	1	15
	c. Swings	4	13
	d. Teeter-boards	5	11
	e. Basketball Goals	10	7
	f. Baseball Backstops	7	10
	g. Others		
	Tether Balls	6	
	Giant Strides	2	
	Merry-go-rounds	3	
	Slides	3	
	Sandbox	1	
	Rings	1	

REMARKS

List below any obstacles that you feel prevent you or your school from doing a better job of teaching. In considering the obstacles, they are to be obstacles brought about by building and building facilities.