A COMPARATIVE STUDY OF THE SCORE CARDS USED BY STATE DEPARTMENTS IN SCORING RURAL SCHOOLS IN THE UNITED STATES

A THESIS

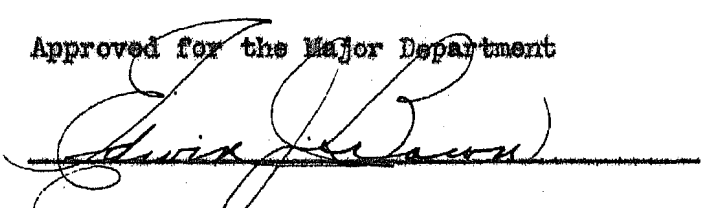
SUBMITTED TO THE DEPARTMENT OF EDUCATION AND THE GRADUATE COUNCIL OF THE KANSAS STATE TEACHERS COLLEGE OF EMPORIA IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE DEGREE OF MASTER OF SCIENCE

By

Clyde R. Colyer

May, 1933

Approved for the Major Department



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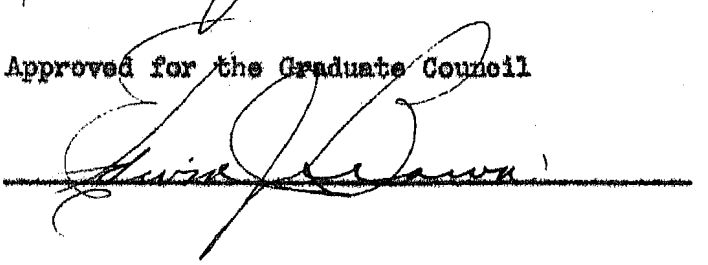

ACKNOWLEDGMENT

Much credit for this study is due to Dr. Edwin J. Brown who suggested the topic and who so kindly gave helpful suggestions and valuable assistance.

C.R.C.

TABLE OF CONTENTS

TABLE OF CONTENTS (continued)

LIST OF TABLES

CHAPTER I

INTRODUCTION

The Character of the Study

It has been reliably estimated that there is a total of 170,000 rural school buildings in the United States. What uniformity is there in the score cards used by state departments in scoring rural school buildings and sites? What uniformity is there in the ability of county superintendents and rural school supervisors to judge accurately the condition of the school building and site? The answer to these questions lie at the basis of this study.

Often the writer has been asked by school board members and patrons, who have been discussing the school's score card, "What do we know about our school after reading this report?" "What do the numbers after the items mean?" "What basis is used in giving the value to each item?" "If some one else had done the scoring, would our score have been the same?" "If we get a score of 700 out of a possible 1,000, does that mean we have 70% of an ideal school building and site or that we have 70% of what is considered necessary for school buildings and sites?" "Why can they not use a score card which is easily understood?" "What should we do with the report?" "What does the state department do with the report?" "Does the improvement which we make on our building show on the report?" "Are these reports made for political purposes?" "Have these reports always been in the same form?" "What do these reports really mean?" "Do they actually have a value?"

The writer has often considered how it would be possible to give board members and school patrons the most complete and accurate information

possible, which relates to their school site and building, tabulated in such a way that it is understandable.

The problems confronting the administrators are: "What are the essential items on the score card?" "What value should be placed upon the entire card and upon each individual item?" "Should the card be uniform throughout the United States?" "Is there a need for a score card in every section of our nation?" "Could a nation-wide score card be so constructed that it would be accurate and reliable in all places?" "What type of card would prove to be the most desirable?" "Would it be more desirable to use large cards or the booklet type score cards?" "Should the cards be objective in type or should they be of the questionnaire type?" "Would accurate and complete score cards be of value to school boards and to school patrons?"

School administrators have long given thought to the development of the best procedures for the scoring and comparing of the rural school building and sites. Much progress has been made. It must always be kept in mind that the accomplishment of educational goals and the needs of children will be the measuring sticks which must be used in measuring proposed schemes. Plans should be laid for the equality of educational opportunity for all, rich and poor alike, whether located in California, Maine, or Florida. It is evident that all children must have an equal opportunity and equally healthful environment.

A majority of the state departments and state supervisors use some form of report of rural school buildings and grounds which informs the school board and patrons of some facts relative to the condition of the building and site. If improvement is to be made in rural school building and site, the score card must take an important part in the educational plan or procedure.

Previous Studies

A careful survey of the field indicates that there has not been a careful study of rural school score cards national in scope.

S. M. Marrs and Burl Bryant[1] made a study, not of a comparative nature, of the score cards of other states and the score cards which were then in use in Texas and from this study set up a score card now in use by the Texas State Department.

Edwin L. Holton and V. L. Strickland[2] have devised a "Score Card for Rural Schools." It set up definite goals and standards. This card is of value in determining the extent of improvements needed as well as evaluating schools and school buildings.

E. J. Ashbaugh and P. R. Stevenson[3] devised "A Score Card for Rural School Buildings." This score card is broken up into 68 subheads. It is so constructed that the building may be classified under one of three classes: standard, fair, or bad.

Julian E. Butterworth[4] constructed the booklet, "Improving the School-

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[1] S. M. Marrs and Burl Bryant, Texas Rural School Standards (The Department of Education, Austin, Texas. November, 1930).

[2] Edwin L. Holton and V. L. Strickland, A Score Card For Rural Schools (Kansas State Agricultural College, Manhattan, Kansas. June, 1918).

[3] E. J. Ashbaugh and P. R. Stevenson, A Score Card For Rural School Buildings (Ohio State University, Columbus, Ohio. January, 1924).

[4] Julian E. Butterworth, Improving the School-Building Facilities of One- and Two-Teacher Districts thru Measurements (New York State College of Agriculture, Cornell University, Ithaca, New York. June, 1922. Extension Bulletin 52).

Building Facilities of One- and Two-Teacher Districts thru Measurement." This card was used in a New York Rural School Survey in the spring of 1921.

G. D. Strayer and N. L. Englehardt[5] constructed "A Score Card for Village and Rural School Buildings of Four Teachers or Less." This score card was devised from the Strayer-Englehardt Score Card for City School Buildings. It is useful in evaluating old buildings and planning new ones.

The State Department of Ohio[6] published "A Score Card for Rating Rural Schools." This score card rates community, school organization, teacher, furnishings and supplies, the school plant, and the superintendent.

The State Department of Oklahoma[7] uses a "Model School Score Card." It is issued by the State Department of Public Instruction. It is a two-page sheet covering site, buildings, equipment, and organization.

In Pennsylvania the State Department[8] uses the score card, "Building and Equipment for a One-Teacher School," published by the state department.

The Scope of the Study

This study undertakes the analysis of score cards used by state departments which attempt to score rural schools on a state-wide basis.

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[5] G. D. Strayer and N. L. Englehardt, Score Card for Village and Rural School Buildings of Four Teachers or Less (Teachers College Bulletin, Columbia University, New York City. January, 1920).

[6] The Achievement Score Card, (State Board of Education, Columbus, Ohio.)

[7] Oklahoma Model School Score Card, Oklahoma City, Oklahoma.

[8] Robert C. Shaw, James F. Chapman, Arthur P. Mylin, Mervin J. Wertman, and Charles Anderson, Building and Equipment for a One-Teacher School (State Board of Education, Harrisburg, Pennsylvania. Bulletin No. 32, 1927).

Thirty-two states use a score card for this purpose. Of the thirty-two states, three--Minnesota, North Carolina, and Louisiana--use the score cards only for the purpose of ascertaining whether or not the school has met the requirements for state aid.

Limitations Placed on Problem

Primarily the study was to include the entire United States. It was the aim to make the study nation-wide, and to include the entire score cards used by state departments. The study was started with this thought in mind. When all the material was received, it was found to be so voluminous that it would be exceedingly difficult to compare accurately all of the factors in one study. For this reason only those parts of the scoring devices dealing with the site, building, out-buildings, and water supply were used and analyzed.

The Problem

In this study an attempt has been made to answer the questions which arise when school board members and school patrons discuss the school building rating and what the rating actually means. The problem of this investigation is to ascertain by comparison the uniformity or lack of uniformity, the efficiency or deficiency in score cards now used by state departments in the United States in scoring rural school buildings and sites. Finally, as a result of this study, to set up a score card which would serve as a standard or measuring stick with which to compare and to score all rural school buildings and sites. These standards are based on this study and an appraisal of current literature and practices.

Sources of Data

Early in 1933, a personal letter was sent to each State Superintendent of Public Instruction in the United States asking for a score card used by his department in the scoring of rural schools.* On May 22 of the same year and again on June 15 follow-up letters were mailed to those departments which had not answered the previous letter. Out of this number, 48 replies were received, making the final receipt of replies 100%. Inquiries were also sent to the U. S. Commissioner of Education, and to a number of the leading colleges of education and commercial publishing companies in an effort to locate any similar surveys which had been made. Interviews were arranged with architects, physicians, and educators to obtain their opinions on suitable rural school buildings and sites.

Types of Date Collected

The data obtained from the score cards of twenty-nine states were of the following types:

(1) Type of building scored

(2) Method of scoring building

(3) Comparative importance of item scored

(4) Consideration given to the child's health

(5) Terms used in scoring building and site

(6) Consideration given to environment of the child

(7) Rank of item scored

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* The appendix at the close of the study contains the letters used in securing the official score cards from the various state officials.

(8) Size of building

(9) Recommended heating systems

(10) Beautification, or landscaping of site

(11) Type and kind of out-buildings

(12) Location of building, out-buildings, playground and playground apparatus, location of drinking water, etc., on the site.

(13) Agreement on types of score cards

(14) Frequency of scoring building

(15) Purpose of scoring building

(16) Value of community of report

(17) Location of school site

(18) Ventilating system

(19) The essential items which should be considered in this study

(20) The items which the patrons of the school would like to have included in a report

(21) General explanations included in the reports

(22) Arrangement within the building

(23) Cleanliness of building and grounds

(24) Source and location of water supply

(25) Environment

(26) Uniformity or non uniformity of score cards

(27) Location of states which use score cards

(28) Understandability of the score cards

(29) System of scoring used

(30) Location of states which do not use score cards

Definition of Terms

The term, patron, is used to refer to the adult citizen living within the boundaries of the school district.

Administrators refers to those responsible for the score cards and their construction.

Objective type scored on a definite scale.

Questionnaire type refers to that type which may be answered by yes or no without assigning a definite value to any item.

Measuring stick refers to a definite scale which may be used in measuring objects accurately.

The state department refers to the State Superintendent of Public Instruction in each state.

Booklet means a small book consisting of four or more pages.

Relative condition is a term which compares one item or object with another of known value.

Out-buildings is used to refer to toilets, barns, coal houses, garages, etc.

Rating is a term used to mean the value given to the school which has been scored.

Board Members is used to refer to the elected representatives of the school district.

Presentation of Data

The plan in this study has been to give a presentation of the original data collected. These data have been classified and organized into statistical tables. Each table is analyzed and discussed. From the study the writer has made conclusions and constructed a comparative score card.

CHAPTER II

ATTITUDE OF STATES TOWARD USE OF SCORE CARDS FOR RURAL SCHOOLS

After studying the replies received from the 48 state departments from whom the writer had requested a copy of the score card used in that state in the scoring of rural school buildings, it is evident that it is not a uniform practice to score rural schools. Again, the reports clearly show that the states have not acted uniformly in the construction and use of score cards for rural schools in those states using cards.

TABLE I

STATES WHICH DO NOT SCORE RURAL SCHOOLS ON A STATE-WIDE BASIS

Name of State		
Utah	Arizona	South Dakota
Colorado	Connecticut	California
Illinois	Massachusetts	Delaware
New Hampshire	New Jersey	Nevada
New York	South Carolina	New Mexico
Rhode Island		

Read table thus: all states in the above table use score cards for the scoring of rural school buildings.

TABLE II

STATES WHICH USE SCORE CARD ONLY FOR APPROVAL FOR STATE AID

Name of State		
Louisiana	Minnesota	North Carolina

Read table thus: all states in the above table use the score card for the purpose of ascertaining if the school has met the requirements for state aid.

TABLE III

STATES WHICH SCORE RURAL SCHOOLS ON A STATE-WIDE BASIS

Name of State		
Kansas	Texas	Florida
Wisconsin	Maine	Virginia
Vermont	Ohio	West Virginia
Alabama	Iowa	Tennessee
Michigan	Georgia	Montana
Wyoming	Oklahoma	Mississippi
Washington	Arkansas	Pennsylvania
North Dakota	Kentucky	Nebraska
Idaho	Missouri	Indiana
Maryland	Oregon	

Read table thus: all states in the above table use score cards for scoring rural schools.

Conclusions Drawn from Tables I, II and III

I. These tables show that it is not an accepted practice throughout the nation to score rural school buildings on a state-wide basis.

II. Most of the states situated along the Atlantic seaboard or where the population is dense do not score rural schools.

III. In the Southwestern part of the United States where the states are sparsely populated, score cards are not used.

IV. It appears that score cards are not used in any state for the sole purpose of securing a certain type building or grounds.

V. They are used however for the purpose of evaluating the building and its site in terms of requirements which have been set up in most cases by the individual state departments.

VI. Rural areas which are neither densely nor sparsely populated seem to be more taken up with the idea of rural schools than either of the two above mentioned areas.

VII. States which use the score card as a means of determining whether or not rural schools have met the requirements for state aid are located in widely separated sections of the nation.

VIII. The lack of uniform practices in the scoring of rural school buildings, sites and out-buildings, which according to the best available statistics, number one hundred seventy thousand shows the lack of central authority and the flexibility of our school systems.

IX. Twenty-nine states use the score card on a state-wide basis for scoring rural school buildings and sites. Three states use the score card for the purpose of determining whether or not the school has met the requirements for financial aid. Sixteen states do not use score cards on a state-wide basis.

X. It is evident that geographic location does not determine whether or not a state department uses score cards for scoring rural schools.

XI. It is evident that the score cards in use have been developed for some particular state.

XII. There is no evidence to show that any cooperative effort has been made to develop a score card for use by more than one state.

Source of Score Cards

A survey of the score cards show that most of the score cards are constructed within the state where the card is used. This fact is clearly shown by the following list of score cards with their authors:

North Dakota State Score Card for Standardization of Schools. Author not given. Scored by state school inspector.

Texas Rural School Standards. Burl Bryant and S. M. N. Marrs authors. Scored by County Superintendent.

Application for Aid, State of Minnesota. Author not given. Scored by teacher of school.

Official Rating Sheet for Vermont Rural Schools. Prepared by state department of Education. Scored by County Superintendent.

Score Card Elementary Schools, Mississippi. Prepared by the State Department of Education. Scored by County Superintendent.

Score Card for One-Teacher Schools, Pennsylvania. Authors, Robert

C. Shaw and members of the Rural Education staff and four county superintendents. Scored by County Superintendent.

Standard or Superior School Rating Card for Montana Rural Schools. Prepared under direction of state department of Education. Scored by County Superintendent.

Standards for the Classification of Elementary Schools. Authorized by the State Board of Education, Montgomery, Alabama. Scored by local committee.

Standards for Florida Elementary Schools, prepared under the direction of W. S. Carthon. Scored by teacher of school.

Wisconsin Score Card for One- and Two-Room School Buildings. Prepared in the Department of Public Instruction by G. S. Dick, G. H. Drewry, J. T. Giles, H. W. Schmidt, J. M. Thomas and A. A. Thomson. Madison, Wisconsin. Scored by the County Superintendent.

Standard School Requirements, Boise, Idaho. Author not given. Scored by County Superintendent.

Elementary School Inspector's Report, Raleigh, North Carolina. Author not given. Scored by Elementary School Inspector.

Score Card for Rural Schools, Lansing, Michigan. Scored by inspector. Author not given.

State Department of Education, Atlanta, Georgia. Application for Accrediting Elementary Schools. Author not given. Scored by supervisor and approved by County Superintendent.

Arkansas State Department of Education. Score Card for Elementary Schools. Author and scorer not given.

Report of Inspection of Missouri Rural Schools. Author not given. Scored by County Superintendent.

State of Washington Department of Education, Standard School Rating Card for Washington Rural Schools. Approved by the state department. Scored by County Superintendent.

Standard School Rating Card for Iowa Rural Schools. Approved by State Department of Education. Scored by County Superintendent.

Standards for Rural Schools, Salem, Oregon. G. M. Lyon, J. E. Meyers, and E. A. Sayre, authors. Scored by County Superintendent.

Score Card for Elementary Schools. Published by State Department of Education, Nashville, Tennessee. Scored by teacher.

Standardization of Rural and Graded Schools. Rural and Grade Department revision authorized by the State Board of Education, Topeka, Kansas. Scored by County Superintendent.

Requirements for Standardization of Rural Schools. Prepared by Chloe C. Baldridge, Lincoln, Nebraska. Scored by teacher, then County Superintendent or state department.

Form for Checking Elementary Schools Seeking Approval. Authorized by State Department of Education, Baton Rouge, Louisiana. Scored by teacher then state supervisor of rural schools.

State of Ohio Department of Education, Application for Certificate for Elementary School. Scored by teacher and the County Superintendent.

Indiana School Standards with Instructions for Scoring. Prepared under the direction of the Inspection Division. Scored by state inspector.

Official Score Sheet for Wyoming Rural Schools. Issued by the State Department of Education, Cheyenne, Wyoming. Scored by the County Superintendent.

Standards for Classification of Elementary Schools, State of West Virginia. Approved by State Board of Education, prepared by Myra M. Nefflen.

Scored by County Superintendent.

Oklahoma Model School Score Card, by State Department of Education, Oklahoma City. Scored by County Superintendent.

Superior Service and Professional Cooperation (Supplement to item No. 7 of the salary schedule), Frankfort, Kentucky. Approved by State Department of Education. Scorer not given.

Elementary School Report, Richmond, Virginia. Approved by State Department of Education. Scored by teacher.

It will be noticed that each state department prepared its own score card and that but one of the above mentioned states used a score card purchased from a publishing company.

TABLE IV

TABLE SHOWING NUMBER OF PAGES IN EACH SCORE CARD

State	Pages	State	Pages	State	Pages
Kansas	46	Texas	31	Florida	23
Wisconsin	4	Virginia	2	Maine	5
Vermont	4	West Virginia	8	Ohio	2
Tennessee	12	Michigan	2	Iowa	2
Georgia	4	Alabama	41	Montana	4
Mississippi	2	Oklahoma	4	Wyoming	15
Washington	4	Pennsylvania	2	Arkansas	2
North Dakota	1	Kentucky	2	Nebraska	76
Idaho	4	Missouri	4	Indiana	27
Maryland	4	Oregon	4		

Read table thus: the Kansas score card contains 46 pages. Texas score card 31.

Table IV was constructed from score cards which were received from twenty-nine state departments. Eight score cards use more than four pages in their score cards. This type of score card contains a manual which gives

some directions for its use, but in no case do the directions appear to be complete under all conditions. There is much disagreement as to what the score cards should contain as evidenced by the great difference in the number of pages which the score cards contain. The Nebraska manual which contains the score card has 76 pages while the North Dakota score card is unaccompanied by a manual and contains only one page. Eight state departments use a 2-page score card and eight use 4 pages. This number of pages apparently is the most popular, as more score cards contain this number than any other.

There is no more agreement among the states as to the total number of points assigned to the entire score card than to the number of pages given to the score card the table below will show.

TABLE V

TABLE SHOWING NUMBER OF POINTS ON EACH SCORE CARD

State	Points	State	Points	State	Points
Kansas	1000	Texas	1000	Florida	----
Wisconsin	1000	Virginia	----	Maine	250
West Virginia	100	Vermont	200	Ohio	400
Tennessee	1000	Michigan	1000	Iowa	1290
Georgia	----	Alabama	1000	Montana	100
Mississippi	1000	Oklahoma	6000	Wyoming	1000
Pennsylvania	100	Washington	100	Arkansas	1000
North Dakota	----	Kentucky	1000	Nebraska	118
Idaho	250	Missouri	----	Indiana	----
Maryland	----	Oregon	100		

Read table thus: the Kansas score card contains 1000 points. The Texas score card contains 1000 points. Florida does not use a point scoring system.

It will be noticed that the range in points for the entire score card is from 100 points to 6000 points. This is a very great range. However on the Oklahoma score card only 1000 points are used for the items under

consideration in this investigation. The other points are given to other factors as classroom management, procedure, and outcome. Five state departments use one hundred points as the basis for the perfect score. Ten score cards have used the 1000 point basis. This is apparently, from the frequency of appearance, the most popular number of points for the score card total. This will allow a larger number of points to be assigned to each item, thus making it possible to assign a number of points which will have a larger range and represent the condition of the item.

Table VI which follows shows the variety in the number of items which appear on the twenty-nine score cards. It will be noticed that eighteen is the greatest number of main items and four the least number of items. From the frequency of appearance or use the 6" by 9" score card is apparently the most popular size. Twenty state departments use the booklet type score cards and nine use the card type. There is greater agreement in the construction of the finished card in that printing is the common vehicle of expression and in this it may be noticed that there is not complete agreement. Without exception, the most apparent thing about the three tables is their great variety and non-uniformity. In other words, the only place in which the different cards agree is in the failure to agree.

Table VI shows the number of items listed by states on the score cards which were submitted for this investigation. The size, kind and type of card is also shown. It will be noticed that there is a lack of uniformity in the cards.

TABLE VI

NUMBER OF ITEMS, SIZE, TYPE, AND KIND OF SCORE CARD USED

State	Items	Size	Kind	Type
Kansas*	18	6 x 9	Booklet	Printed
Wisconsin	7	8½ x 11	Booklet	Printed
Vermont	9	7 x 11	Booklet	Printed
Iowa	6	8 x 10	Card	Printed
Georgia	6	8½ x 11	Booklet	Printed
Wyoming	8	6 x 8 3/4	Booklet	Printed
Washington	6	5¼ x 7 3/4	Booklet	Printed
North Dakota	14	6 x 8½	Card	Printed
Idaho	8	6 x 9	Booklet	Printed
Maryland	9	6 x 9	Booklet	Printed
Texas	5	6 x 9	Booklet	Printed
Virginia	8	8½ x 11	Card	Printed
West Virginia	5	5½ x 8½	Booklet	Printed
Michigan	11	4 3/4 x 8½	Card	Printed
Alabama	15	6 x 9	Booklet	Printed
Oklahoma	7	9½ x 12	Booklet	Printed
Pennsylvania	4	5 x 8	Card	Printed
Kentucky	9	8½ x 11	Card	Mimeographed
Missouri	7	5½ x 8½	Booklet	Printed
Florida	9	9 x 12	Booklet	Printed
Maine	8	8½ x 11	Booklet	Mimeographed
Ohio	6	8½ x 14	Card	Printed
Tennessee	8	6 x 9	Booklet	Printed
Montana	6	5½ x 8½	Booklet	Printed
Mississippi	6	14 x 17	Card	Printed
Arkansas	7	8½ x 11	Card	Printed
Nebraska	8	8½ x 11	Booklet	Mimeographed
Indiana	7	6 x 9	Booklet	Mimeographed
Oregon	6	6 x 9	Booklet	Printed

Read table thus: Kansas score contains 18 main items, is 6 by 9 inches in size, is of the booklet type and is printed. The Wisconsin score card contains 7 main items and is 8½ by 11 inches, is of the booklet type and is printed.

* Only the main items or heads were considered in counting the number of items on each score card. This number does not include the subheads under each item.

CONCLUSIONS

It has been the purpose of this chapter to determine which states use score cards for the scoring of rural schools and the extent, if any, to which the cards agree in number of items on card, purpose of using cards, type of card used, size of card and number of points allowed on each card.

The following conclusions have been drawn with regard to the basic results, tabulations and findings of this chapter.

I. There is evidence to show that it is not a uniform practice to score rural school buildings on a state-wide basis as only 29 out of 48 use score cards on a state-wide basis.

II. There is little agreement if any as what items should be included in the score card.

III. There is lack of uniformity in assigning the same number of total points to each score card.

IV. Score cards are not used for the same purpose in all states as three states use the score card to determine if the school has met the requirements for state financial aid, and twenty-nine use the score cards for the purpose of classification.

V. The score cards do not agree in the type of card used, some state departments using a one-page card, others using a booklet type with a manual of directions. The size of the card is not uniform but varies greatly in size and kind of material of which the card is constructed.

CHAPTER III

THE SCHOOL SITE AS A SCORE CARD ITEM

In considering items on the score cards under the term "site," it is apparent there is disagreement among the state departments as to minimum essentials. All agree that the school should have a site, but there is disagreement as to what else should be included. The tendency seems to be to include those items which the author of the particular card deems essential.

The North Dakota State Score Card for Standardization of Schools lists only one item grounds under the heading of site.

The Report of Inspection of Missouri Rural Schools[1] under the heading School Yard, states:

> Playground of at least ½ acre of unobstructed ground suitable for play and provided with standard equipment for rural schools.
>
> Clean playground, well drained, grass cut spring and fall.

According to the Indiana School Standards with Instructions for Scoring[2] concludes that:

> The school building should be located near the center of the school population of the district and in a suitable environment. Ample playground space and equipment should be provided. The grounds should be landscaped with a well-kept lawn, shrubbery, and good walks in front of the building. A flag and flag-staff should be provided as required by law.

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[1] Report of Inspection of Missouri Schools, Score Card, State Department of Education, Jefferson City, Missouri.

[2] Indiana School Standards with Instructions for Scoring, Department of Public Instruction, State of Indiana, Indianapolis, Indiana. 1931.

Burl Bryant and S. M. N. Marrs, in Texas Rural School Standards, says:[3]

> The schoolhouse should be located so that it is accessible to all pupils. It should be reasonably near the center of population of the district, and not more than two miles from the most distant home, if the children walk.
>
> The schoolhouse should be convenient to main and cross roads.
>
> The schoolhouse should be free from nuisances, such as disturbing traffic, odors from barnyards, noise from gins; and from dangerous conditions, such as high cliffs, swamps, railroads, dangerous bodies of water.

The Department of Education of Kansas, in Standardization of Rural and Graded Schools, states:[4]

> The school advertises the community. A good school building in a good location, with grounds ornamented and properly cared for, attracts the attention of patrons and visitors. Children are also attracted by the beauty of the surroundings and fine facilities for play. Children lose respect for dilapidated buildings and neglected grounds. We believe that training for good citizenship begins outside the school building and much of it is possible in the school yard.
>
> The law requires one acre for the school grounds, but two acres, or even three, are better. The yard should be mowed twice each summer to avoid hard stubble. The board should see that the yard is clean when school begins, and the teacher and pupils should see that it remains clean. The yard should be well drained, so that no pools of water remain after a rain. It should be smooth enough that it does not interfere with play or mar the beauty. Good walks add to the appearance and convenience, but should not interfere with play space. In scoring the site, twelve points should be given "play area" and thirteen points to the rest.

The Official Rating Sheet for Vermont Rural Schools mentions the following items under the term school grounds:

> School grounds--safe location, well drained, adequate in size and well graded; neat and well cared for with shrubs or shade trees planted.

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[3] Burl Bryant and S. M. N. Marrs, Texas Rural School Standards. Bulletin No. 280, the Department of Education, Austin, Texas. (November, 1930)

[4] Standardization of Rural and Graded Schools. Bulletin of Department of Education, Topeka, Kansas. (1931)

The Elementary School Report of Virginia mentions three items concerning the school grounds: size of school lot, fenced and what playground is provided.

The Superior Service and Professional Cooperation leaflet, supplement to item No. 7 of the salary schedule of the State Board of Education, Frankfort, Kentucky, sets forth that where the community can be led to see the advantages of walks, walks of some kind should be built. They might be constructed of brick, concrete, gravel or rock. The grounds should be kept clean and free from rubbish of all kinds. Weeds and waste paper should not be allowed on the grounds.

The Oklahoma Model School Score Card lists the items mentioned below: size of site, site well drained, woven wire fence, single cable fence, gate or stile, gate for vehicles, cement walk to road, other walks, cement walk to rear, other walks, growing trees on site, shrubs, flower bed, hot bed or cold frame, fruit trees for teacherage, ground clean, landscape plan, dry storm cave, mudscraper, enclosed sand pile, swings, seesaws, horizontal bard, flying jenny, ocean wave, giant stride, good slide, basketball court complete, extra court and ball, tennis courts with backstop, volley ball court and ball, croquet set and court, playground ball, baseball field and outfit, backstop, closed well or cistern, water tested, concrete platform over well, cistern, roof over well, lattice enclosed, pump in good repair, irrigation and sanitary inspection.

The items listed below were taken from twenty-nine score cards used by the various states in scoring rural school sites. It will be noted that the only complete agreement is on the item site. There is much variation in the number of items enumerated on each card. North Dakota lists one item

and the score card of Oklahoma lists 35. According to the frequency of appearance on the score cards, trees and shrubs are more important than area of site. Beautification of site ranks equal to sanitation of site. Waste paper receptacles on grounds is equal in frequency to clean barn. Centrally located, storm cave and no weeds are equal in the number of times used on the score cards. That the site be fenced is mentioned more often that accessible. Playground apparatus is mentioned more times than safe or clean and neat. The storm cave is only mentioned on one score card that would seem to indicate that local conditions govern this item and that this state is located in the cyclonic storm area. Walks where needed is mentioned by 18 score cards while the elevation is only mentioned by 2; this would seem to indicate that walks are more important than the elevation. Safe is mentioned less times in the score cards than fenced which would lead one to conclude that the fence is more important than safety. The school garden is mentioned by only three of the twenty-nine score cards so this might be due to local conditions. Economy of space is mentioned the same number of times as the garage and fewer times than covered with sod. The playground ranks third in the number of times all items appear on all score cards. Cleared of brush and weeds is mentioned by only three score cards which would seem to indicate that this item is included by local conditions. The 45 items listed on the 29 score cards vary in number of times mentioned from 1 to 29 times. Eight items are mentioned only once; seven items only twice; and 5 items 3 times. Only one item site is mentioned 29 times. The composite results of the tabulation are given below.

TABLE VII

ITEMS LISTED ON TWENTY-NINE SCORE CARDS UNDER TERM SITE

Item	Number	Item	Number
Site	29	Shape of grounds	3
Trees and shrubs	24	Drive or approach	3
Playground	22	Cleared of brush and weeds	3
Well drained	19	School garden	3
Walks where needed	18	Well graded	3
Area of site	17	Elevation	2
Fenced	17	Clean barn	2
U. S. flag and shaft	17	No ashes or other refuse on grounds	2
Playground apparatus	17	Economy of space	2
Clean and neat	12	Dry	2
Well cared for	10	Waste paper receptacles on grounds	2
Accessibility	9	Garage	2
Safe	9	Cost of site	1
Reasonably smooth and level	8	Length of site	1
Lawn	7	Width of site	1
Adequate in size	7	Size, form and use	1
Flowers	6	No weeds	1
Good condition	5	Centrally located	1
Sanitation	4	Storm cave	1
Beautification of site	4	Nature of soil	1
Covered with sod	4		
Environment	4		
Landscaped	4		

Read table thus: each of the twenty-nine score cards mentioned the term site, twenty-four out of 29 score cards were found to contain the item trees and shrubs. Twenty-two listed playground, making this the third item listed in the number of frequency.

Values Assigned to Items

The State Department of Education of Maine allows a score of 15 points for the site a total of 6% of the score card; while the state department of Wyoming allows a possible 50 points out of 1,000, a total of 5%. Wisconsin allows 125 points of 4 items with 6 subdivisions. The Wisconsin card is in 1,000 points, site is 12½% of total. The score card of the state of Alabama lists 5 items under the term site and allows a possible score of 100, or 10%

of the entire card. The Montana score card allows 5 points for a perfect score for the school yard, or 5%. Nebraska also uses a 10 point scale for the grounds and lists 5 items under this heading, assigning 10% of value of entire card. Oklahoma lists 35 items and allows a score of 150, or 15% of 1,000 points. North Dakota lists one item without assigning any value to it. The score card of the state department of Texas provides for a possible score of 80, out of 1,000 points, 8% on the school grounds, while the state department of Washington assigns the value of 8, or 8% as the highest possible score on the site. The score card used by the state department of Florida does not assign a value or score to the different items. Many of the items may be answered by "yes" or "no". Twelve questions are asked about the school site. Iowa lists 6 items under the subject of grounds and makes possible a total score of 70 less than 6%. Michigan State Department of Education uses 120 or 12% for the highest possible score under the term grounds and lists 8 items under this heading. Arkansas has 100 points or 10% for a perfect score and lists 6 items under site. Under grounds and outbuildings, the score card of Mississippi allows 200 points or 20% of the score card. The Kansas score card with 5 items and 36 sub-divisions allows 10% of the total score or 100 points out of the possible 1,000 for the site. Idaho lists 7 items under site and assigns 26 points or 10% of the total value of the score card. The West Virginia score card lists building and grounds together and allows 20 points out of 100, this being 20% for both building and grounds. The state department of Pennsylvania lists 5 items and 9 sub-items under the term site and allows a score of 10 or 10% of the card. The state department of Indiana uses a manual which is quite comprehensive but does not assign values to the items under any heading. The

state department of Missouri uses a four page booklet type score card but does not assign values to the item. In the Tennessee score card grounds and outbuildings are given 100 out of a possible 1,000 points. The Ohio card allows 20 points for the site, out of a possible 400 points. This is 5%. The score card used by the state department of Georgia is of the questionnaire type, with the questions being answered by yes or no, without assigning any value to the items. The first use of their score card seems to be for the accrediting of the elementary schools. The score card of the state department of Oregon uses the 12 point out of 100 points, or 12% of the total value of the score card for the site. It will be noticed that while the number of points assigned to the site varies between 5 points and 150 points; the per cents vary only between 5 and 20 per cent.

CONCLUSIONS

It has been the purpose of this chapter to determine the extent, if any, to which the score cards used by the state departments agree in: uniformity of items, value of items, number of items, and items considered under the term "site."

The following conclusions have been drawn with regard to the basic results, tabulations and findings of this chapter.

I. There is no indication that the score cards are uniform.

II. It is evident that it is not a uniform practice to score rural school sites, as only twenty-eight of the forty-eight state departments score rural school sites.

III. There is little, if any, agreement as to the importance of like items.

IV. The item playground is listed more often than the item safe. It

would seem that the health development of the child is of the first consideration, and the child's safety as regards accidents is of secondary importance.

V. There is a lack of uniformity in the score cards in assigning values to items with the same nomenclature which appear on the cards.

VI. There is a great diversity in the number of items listed or appearing on the score cards.

VII. The lack of uniformity indicates the score card is the product of each individual state department not a cooperative effort.

CHAPTER IV

THE SCHOOL BUILDING

The school building has passed through an evolutionary process. The first American schools were held in private homes. Children came to some woman's house where they were taught the rudiments of reading and spelling and sometimes a little counting. This was the dame school.

Following this, we find that the school had a building of its own. Usually the building was constructed of logs and was roughly made. The spaces between the logs were filled with clay. The outside of the building was not very attractive. The inside of the building was no more attractive than the outside. Long heavy slabs were hewn from large logs, four legs were placed in the corners and these slabs were used for benches. For desks, wide boards cut from logs were utilized, being laid across pegs placed in the walls.

Later a one-story frame school building was used. It was constructed of lumber which was sawed at the local saw mill. This building had three windows in each side. Light was admitted from every direction. The equipment was a little better. Desks were now in use but were made of pine. They were used by the boys who like to whittle and carve to test their knives to see if they were sharp. The blackboard was made by painting the plaster black. It cracked and holes in it made writing difficult.

These three school buildings may be contrasted with the buildings in use today. While school buildings are not alike all over the nation today there is some evidence that certain advancements have been made.

TABLE VIII

TABLE SHOWING FREQUENCY OF DISTRIBUTION OF ITEMS

CONCERNING THE BUILDING MENTIONED ON THE TWENTY-NINE SCORE CARDS

Item	Number	Item	Number
Building	29	Fuel room	6
Interior painted correctly	27	Workroom	6
Cloakroom with hooks	26	Lunch cupboards	5
Natural lighting	25	Shelves for ouneches	5
Window space compared to floor space	23	Fly screens	5
Approved ventilating system	21	Approved plan	5
Approved heating system	20	Frame structure	5
Exterior painted	20	Modern type structure	4
Clean	18	Size	4
Locks on windows and doors	17	Furnace	4
Good floors and walls	17	Window boards	4
Adjustable shades	16	First aid room	4
Blackboards	15	Height of windows from floor	4
200 cu. ft. air per pupil	15	Good condition	3
15 sq. ft. fl. space per pupil	14	Shows depreciation	3
Good foundation	12	Well constructed	3
Good roof	11	Adequate classroom	3
Artificial lights	11	Ventilating heater	3
Auditorium	10	Height of ceiling from window	3
Height of ceiling	10	Facing of building	2
State of repair	9	Shape	2
Lockers	9	Insured	2
Vestibule	8	Appearance of building	2
Floors oiled or treated	8	Exits open outward	2
Translucent window shades	8	Cupboards for children's work	2
Supply room	8	Shelves for overshoes	1
Library room	8	Name over door	1
Doors open outward	7	Corridors	1
Adjustable windows	7	Guards properly fastened	1
Porch	6	Rest rooms	1
Fresh air inlet and foul air outlet	6	Door checks	1
Length of room	6	Gymnasium	1
Width of room	6	Chimney in good repair	1

Read table thus: twenty-nine cards were investigated; all scored the building. Twenty-seven scored on interior painted correctly. Cloakroom with hooks ranked second. Natural lighting or the direction from which the light enters the room is scored by 25 of the 28 states.

If the order of frequency of appearance of the various items may be taken as a criterion of importance, it appears that the cloakroom with hooks is of more importance than an approved heating system or how the windows are placed in the building for the natural lighting. Blackboards are more important than fly screens. A fresh air inlet into the room which will supply fresh air for the children is of less importance than a supply room. An approved plan is of less importance than a supply room or library. Doors which open outward are of less importance than lockers. The exterior painted is of more importance than a good roof or foundation. Height of windows from floor is of less importance than a porch. Lockers are more important than windows which will open and close. Floors treated or oiled is of more importance than a modern structure or approved plan. The state of repair is less important than blackboards. The name over door ranks the same in value as the gymnasium. Artificial lights are more important than an approved plan. The chimney or flue in good repair is of equal importance with shelves for overshoes, and guards properly fastened. The rest room and door checks are are equal in rank.

While the statements above appear preposterous in many ways, they serve to suggest to the reader the slip-shod inefficient, careless organization of many of the score cards used at the present time by state departments.

Building

The school building should be planned to provide for the health and happiness of the children. The State Department of Education of Wyoming tells us:

> Great care should be exercised by school board members while school houses are being planned and constructed to make sure that the build-

ings are substantially built. A good building will give long and satisfactory service, but a poorly constructed one in a very few years begins to demand repairs.

The floor plans should receive the careful consideration of someone familiar with school needs. There should be no wasted space and the arrangement of rooms and equipment should be such as to make for efficiency.

Fifteen square feet of floor space per pupil is the generally accepted standard of measurement.

A number of schools have been found with ceilings so low that good ventilation was impossible. Standard schools will be required to have ceilings high enough to provide a large enough volume of air.[1]

The building should be so constructed that provisions are made for safety. All outside doors and all doors leading from classrooms, basement, workroom, library, supplyroom and all other doors which the pupils use should open outward.

The building should be kept in good state of repair so that it will not show depreciation because of neglect. Bryant and Marrs say:

> All necessary painting, roofing, guttering, and repairing should have attention before the opening of the school term. Ceilings and walls should be wiped down thoroughly, woodwork and furniture varnished, floors scrubbed and oiled. Window panes should be tightened and broken ones replaced. All worn parts of stoves and other equipment should be replaced. A general cleaning of schoolhouse and grounds should precede the opening of school, so that teacher and pupils may begin work under conditions that are conductive to health, comfort and happiness.[2]

Basement

The basement is that part of the building which is constructed first. The initial cost is low in comparison with that of the entire building. The

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[1] Bulletin No. 2, Series B. (State Department of Education, State of Wyoming. p. 11. 1931.)

[2] Burl Bryant and S. M. N. Marrs, Texas Rural School Standards, Handbook for Trustees and Patrons (Bulletin No. 280. November, 1930).

basement has many uses. It may be used for an auditorium in which community gatherings, parent teacher meetings, 4-H clubs and the like may be held. It may be used for a recreation room in inclement weather or for a lunch room at the noon hour. This part of the building may house the manual training, domestic science, and other work rooms of the school. It may provide for a furnace and thus make possible the installing of an efficient heating system for the school. It may also provide a space for water flushed or chemical toilets. It is that part of the building which differentiates between the modern structure and the building of past generations.

The basement may provide a place for physical education classes and play periods. This part of the child's development has been largely left to chance. Physical education, if used, would make possible a program for child development. The basement should by all means be an integral part of the rural school building.

The foregoing discussion becomes pertinent when attention is called to the fact that but three, or 11%, of the twenty-nine score cards for rural school buildings utilized in this study made mention of the basement at all.

Heating Systems

There is general agreement among state departments that school buildings should have an approved heating system. Most score cards do not specify what kind of heating systems are approved. The three different types of heating systems--furnace, room heater with screen or jacket, and unscreened stove--are all mentioned. No mention is made whether the desirable type of furnace be hot air, hot water, or steam. All agree that the ordinary heating stove is not satisfactory for school room purposes.

The heating system use should be of such a type that the air is kept in circulation and an even temperature is maintained throughout the room. The heater or furnace should have a provision for keeping the humidity of the air at the desired degree.

The score cards agree that the placing of the heating system in the school room should be given considerable thought and planning. Space is valuable and the arrangement of school room equipment is of utmost importance. The problem in placing the heating system is to secure the best results without disturbing the symmetry of the room. Probably the best arrangement and results in general may be obtained by using a basement furnace. This will not disturb the arrangement of the room. The basement furnaces have a provision for the circulation of air and controlling the humidity.

Ventilation

There is a general agreement that an approved ventilation system is necessary for school buildings. State departments generally agree that there should be 200 cubic feet of air space for each pupil when the room is crowded to capacity. Chloe C. Baldridge says:[3]

> Window boards should be used in at least four windows when a basement furnace or a jacketed stove is used without fresh-air intake and foul-air outlet. A fairly satisfactory arrangement during severe weather is to raise the lower sash and insert a board four or five inches in width. The sash should be lowered on the board. This device will permit air to enter between the upper and lower sashes in such a manner as to prevent direct drafts on the pupils, which should, of course, be avoided.
>
> The temperature of the room should be sixty-eight degrees, never over seventy degrees, by nine o'clock, and should be kept as close to

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[3] Chloe C. Baldridge, Official Score on Standard Rural Schools in Nebraska (State Department of Education, Lincoln, Nebraska. 1929).

> that temperature throughout the day as possible. In every classroom there should be a thermometer which should be suspended so as to register the temperature at six feet from the floor. Do not place it against the wall.

The School Code of Pennsylvania contains the following provisions concerning the ventilating systems:

> No school room or recitation room shall be used in any public school which is not provided with ample means of ventilation, and whose windows, when they are the only means of ventilation, shall not admit of ready adjustment both at top and bottom, and which does not have some device to protect pupils from currents of cold air.
>
> Every school room or recitation room shall be furnished with a thermometer.

The air should be so admitted that it does not stir up the dust on the floor. If the weather is cold the ventilating system should provide for warming the air before it comes in contact with the pupils.

There are certain principles of ventilation which are generally accepted by school authorities. To illustrate, it is necessary that each pupil should have 200 cubic feet of air space when the room is crowded to capacity. There should be a provision for admitting at least one hundred cubic feet of air each hour for each pupil. The air should be so admitted that it does not stir up the dust on the floor. If the weather is cold the ventilating system should provide for warming the air before it comes in contact with the pupils. This may be accomplished by having the air enter into the jacket of the room heater or furnace. Equally important with the providing of fresh air, is the provision for removing impure air, gases and moisture which have been exhaled from the body. These gases are heavier than air and circulate near the floor of the room. The foul air shaft or opening must be located near the level of the floor. Ventilation is best accomplished when special pipes or flues are used for this purpose.

It is very difficult to use windows for ventilation. The air entering the room is cooler than the air inside, so it flows toward the floor. This may be prevented if window boards are placed in the open windows. These cause the air to circulate upward when it enters the room and the fresh air is diffused with the air in the room.

Lighting

The score card from the North Dakota State Department of Education[4] lists the item lighting but does not assign it a value or any number of points.

The West Virginia score card discusses lighting thus:[5]

> Lightin--windows narrowly separated, placed at left, or left and rear of pupils seated; window tops square, not less than 11 feet from floor, or at height from floor equal to one-half room width, and bottoms not less than 3½ feet from floor; glass area at least 1/6 floor area, preferably 1/5.

The Nebraska score card is of the questionnaire type. It asks:[6]

> Does the light come from the left or from the left and rear of the pupils only? (If there are windows in front or on the right side of the classroom, this question cannot be answered in the affirmative.) Is your window area equal to one-fifth of the floor area?

The score card used by the state department of Florida is also of the questionnaire type. It asks:[7]

> Is the glass area of the windows (not including transoms) of each

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[4] North Dakota State Score Card for Standardization of Schools.

[5] Standard for Classification of Elementary Schools (State Board of Education, Charleston, West Virginia).

[6] Baldridge, op. cit.

[7] W. S. Cawthon, Standards for Florida Elementary Schools (Department of Public Instruction, Tallahassee, Florida. July 1, 1931).

room equal to at least one-fifth of the floor space of that room? Measure and note exceptions. Does the light fall only over the left shoulder of pupils seated in a classroom? Measure and note exceptions. The ceiling of the average room in the building is --- feet from the floor; the window sills are --- inches above the floor; the ceiling is --- inches above the tops of windows. How are the windows adjusted?

Correct natural lighting ranks third in the frequency item table. It is generally agreed that light entering from one side is the best. J. Y. Joyne says:[8]

> Time and time again the test has been made of comparing the eyes of pupils in rooms lighted on two sides with pupils in rooms with one-side light. The result has invariably been that where as the pupils working in rooms lighted on two sides showed decided eye strain, the pupils working in rooms lighted on one side only showed little or no eye strain. In one case over 60 per cent of the pupils in the two-side lighted rooms showed the strain, and not one pupil in the one-side lighted rooms showed any trace of strain.

Children can do much better work if their eyes are not in a strain. For that reason proper lighting is important. The Official Score Sheet for Rural Schools of Wyoming says:[9]

> To insure adequate lighting, the glass area of the windows should equal one-fifth of the floor space. The light should come from the left or left and rear of the children. If there are rear windows, they should be high in the wall, thus reducing shadows. Ten feet should intervene between the front of the room and the first window. The best light comes from the upper part of the window, therefore shades with rollers at the middle or bottom of the window are preferred. Tan shades are satisfactory as to color because they diffuse the light. Windows which face the east or south furnish light more easily adjusted than those facing other directions.

It will be noted when considering quotations from the score cards that there is an agreement that the light should come from only one side of the room. The light should fall over the left shoulder of the pupil when

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[8] Standardization of Rural and Graded Schools (State Department of Education, Topeka, Kansas).

[9] Official Score Sheet for Rural Schools (State Department of Education, Cheyenne, Wyoming. p. 11. 1931).

seated. That the window area should equal one fifth of the floor space.

Window Shades

There is not complete agreement among the score cards as to the kind and type of window shades that should be used. However all cards agree that shades are necessary. Shades are usually classified on the score cards as "roller shades" and "adjustable shades." The word "roller shade" refers to the type of shade that is fastened at the top and can be raised or lowered at the bottom but the top remains stationary. The "adjustable shade" can be lowered from the top as well as raised from the bottom, thus admitting light from both above and below.

The score card from the state of Wyoming states:[10]

> The best light comes from the upper part of the window, therefore shades with rollers at the middle or bottom of the window are preferred. Tan shades are satisfactory as to color because they diffuse the light. Windows which face the east or south furnish light more easily adjusted than those facing other directions.

Chloe C. Baldridge, Director of Rural Education of Nebraska, says:

> Tan adjustable shades permit the best regulation of light. Two methods of regulating the amount of light have been found satisfactory. One method is to fasten two roller shades near the middle of the window so that one may be rolled down, the other rolled up. This arrangement makes it possible to shade any portion of the window as needed without shading all of it. It makes possible also the use of either the top or the bottom of the window for ventilation purposes. The upper half of the window is the better for lighting purposes. The other method of carying the light conditions in the room is to use shades which are adjustable, that is, shades which may be rolled up or down on the window as needed. The practice of fastening shades at the top of the windows is no longer followed in the best schools.

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[10] Baldridge, op. cit.

CONCLUSIONS

It has been the purpose of this chapter to determine the extent, if any, to which the score cards studied agree in: uniformity of items, value of items, and reliability.

The following conclusions are drawn with regard to the basic results, tabulations and findings of this chapter.

I. There is no indication that there is a uniformity of the score cards.

II. It is evident that it is not a uniform practice to score rural school buildings and sites in the United States.

III. There is a lack of uniformity in score cards in assigning values to like items which appear on score cards.

IV. It is evident that the physical side of the child has been given greater consideration and attention than the aesthetic and character building influences.

V. While there has never been a cooperative plan engaged in by state departments for the standardization of their score cards such a plan would apparently be feasible and workable and produce more uniform results than score cards now in use.

CHAPTER V

OUT BUILDINGS AS SCORE CARD ITEMS

Toilets

Each of the twenty-nine states include the item toilet on their score cards. Some states give detailed instruction for the toilets. Bulletin No. 32 of the Department of Public Instruction of Harrisburg, Pennsylvania, states:[1]

> Indoor flush toilets are preferable wherever a water supply is available. Installation must guard against freezing.
>
> Two outdoor toilets are permitted if constructed according to the specifications of the State Department of Health. (See Health Bulletin 54-A.) These must be free of marking and carvings. Outdoor toilets may be of the two following types: septic closet, or vault or pit with water-tight sides and earth bottom with lid on back of vault giving easy access for cleaning.

Requirements for Standard School Outhouses

1. Separate outhouses for each sex, 50 feet apart.
2. Concrete outhouse floor and vault (earth bottom to vault).
3. Seven foot screen, shielding outhouse entrance and boys' urinal.
4. Boys' urinal trough within outside screened enclosure.
5. 6-inch vent shaft (inside dimensions) from vault to roof.
6. Fly proof hinged lids on seats and on rear vault extension.
7. Weekly use of lime over vault contents.

> Separate outhouses are required for each sex. They shall (where the ground is at all available) be at least 50 feet apart and a similar distance from the school building, within view from school room windows if possible.
>
> Outhouses should not be placed within 150 feet of any spring or well. If impossible to locate at this distance from a spring or well, the vault in all such cases must be built water-tight concrete bottom and sides 6 inches thick.

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[1] Building and Equipment for a One-Teacher School, Bulletin No. 32 Department of Public Instruction, Harrisburg, Pennsylvania, 1927.

A majority of the score cards do not have manuals accompanying them. Therefore it is impossible to quote from them. The manual for the Kansas State Department says:[2]

Indoor Toilets

There is no argument against the indoor chemical toilets properly installed. They are easily supervised, sanitary, convenient, comfortable, and promote morals.

When a new schoolhouse is built, rooms for toilets may be provided connecting with the cloakrooms. An addition may be built to old buildings which provides entrances from the schoolroom. The cost will be a little more than building two outhouses and walks to them.

School boards should be careful that they purchase the right kind of chemical toilets and that they are properly installed. Bowls and urinals that will chip easily soon become insanitary and unsightly. The most satisfactory seats and urinals are those which provide for a current of air from them into a ventilating shaft. The room should also be provided with a ventilator at the top.

Outside Toilets

The girls' and boys' toilets should be located on opposite sides of the yard or a considerable distance apart. They should also be at least 100 feet from the well. A good size for each building is 5 feet by 6 feet. Covers should be put on the seat in such a way that they will not stay open. This can be done by putting a block back of the cover so that it will not quite reach a vertical. A ventilating flue about 6 inches square must lead from the vault through the roof. A small window about 12 by 14 inches in the gable will furnish enough light.

The boys' toilet should have urinal trough. A board screen 7 feet high should be placed in front of the door of each toilet. Lime should be sprinkled in the vaults about twice a week. A covered box in the corner of each toilet will make a convenient container for the lime.

A good-sized vault with the building standing on a substantial foundation of stone or brick or cement should be the minimum consideration.

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[2] Standardization of Rural and Graded Schools (State Department of Education, Topeka, Kansas, 1931. pp. 33, 35, 36).

> The outbuildings should be painted to harmonize with school building. It is well to throw sand on paint on the inside walls before the paint is dry. This makes a rough finish and removes temptation for cutting and marking of walls.

This may be contrasted with the North Dakota score card which mentions the item toilets but does not give any directions or instructions for scoring.

Chloe C. Baldridge discusses outbuildings as follows:[3]

> The old-fashioned unsanitary school toilets are recognized by every progressive community as an evil. The condition which exists in a great many schools is a source of danger to both health and the morals of pupils.
>
> The outbuildings must be located as far from each other as the surrounding conditions will permit, on those portions of the site farthest from the main entrance to the schoolhouse. Refer to Section 6335, Nebraska School Laws. The building should have a window in each side for light when the door is closed, a flue or other means of ventilation of the vault, a lattice board shield not less than seven feet high to protect the entrance from view of the playground, and should be kept well painted both inside and out in accordance with the color scheme used on the school building. While the paint is fresh on the interior walls, they may be coated with a layer of sand to prevent their being defaced with knives or pencils. The toilets should be kept clean and sanitary and both buildings should have daily inspection by the teacher.
>
> Indoor chemical and ventilating toilets are being used in the state. Seward County has perhaps the largest number in Nebraska. Where properly installed and given the ordinary care that is given in the home, they are successful.
>
> When a water supply is available, inside flush toilets are the most satisfactory.

Giving consideration to the requirements in the above quotations it appears that while there is a lack of agreement in all items certain items are considered essential. Separate toilets are considered necessary. They should be as widely separated as possible and should have separate entrances. They should be clean and inspected daily. The toilets should be kept free

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[3] Chloe C. Baldridge, Official Score on Standard Rural Schools in Nebraska (State Department of Education, Lincoln, Nebraska. 1927).

from marks and writing. If outdoor toilets they should be screened from view and fly proof.

All of the twenty-nine score cards considered thought that toilets were necessary. Twenty-one of the 29 made the requirements that the toilets should be separate. Only 16 list sanitary as 1 of the necessary provisions. In order of frequency of appearance on the score cards it may be noticed indoor, and outdoor toilets appear on the same number of cards. Five score cards list toilet paper and only two properly cared for. Only 6 specify that the toilets shall be screened against flies. Seven list ventilation but only 3 out of the 29 score cards suggest that the toilets should be disinfected regularly. Thus disinfected regularly would seem to be of less importance than not marked which is listed 8 times. Only ten of the 29 score cards provide that the entrance must be screened from view and only 3 mention the provision for privacy, or seclusion. As only 4 of the 29 cards list painted as a desirable item, it would appear that it might not be necessary to paint the toilets in accordance with the color scheme of the buildings on the school site. As two of the score cards mention that the toilets should be connected with the schoolroom with a covered passage-way for boys and girls, it would appear that these states which make this provision might be located in a rainy or extremely cold climate. Carefully supervised seems to be thought of less importance than painted, or not marked. It may be noticed that only 7 out of the 29 score cards mention proper location, thus it would seem that the location is not very important. All of these facts and discrepancies can be noticed in the Tables IX and X below.

TABLE IX

ITEMS CONCERNING TOILETS ON THE SCORE CARD

Item	Number of States	Item	Number of States
Toilets	29	Separate for teachers	4
Separate for boys and girls	21	Adequate for children	4
Sanitary	16	Well lighted	4
Indoor	10	Painted	4
Outdoor	10	Provisions for privacy	3
Screened from view	10	Inspected regularly	3
Clean	10	Disinfected regularly	3
Chemical	8	Carefully supervised	3
Not marked	8	Urinal for boys	3
Water flushed	7	Properly cared for	2
Properly located	7	Connected to schoolroom	
Ventilated	7	by covered separate	
Flyproof	6	passage-way for boys	
Approved	6	and girls	2
Toilet paper	5	Condition of	1

Read table thus: twenty-one score cards provided for separate toilets for boys and girls. Sixteen that they should be sanitary. Ten that they be placed indoors.

There were a total of twenty-nine different items listed on the twenty-nine score cards which concerned toilets. The greatest number of items listed on any one card was eleven. The least number listed on any card was two items.

TABLE X

ITEMS CONCERNING TOILETS LISTED BY EACH STATE DEPARTMENT

Items	States	Items	States
11	2	6	7
10	1	5	2
9	2	4	2
8	2	3	5
7	4	2	2

Read table thus: two states listed eleven items for scoring the toilets. One ten items and two nine.

Fuel House

While only ten of the twenty-nine states which use score cards mention the coal house as an item on the score card this fact does not lessen its value. Seven score cards mention the item barn and only three mention the garage as a possible score card item. In the Official Score Sheet for Wyoming Rural Schools is found:[4]

> The fuel house should not be close to the school house and should be kept in good repair. Not all schools need a barn or garage, but where conditions call for one or the other, the matter should be given consideration when the school is being checked.

Burl Bryant and S. M. N. Marrs, in the Texas Score Card, say:[5]

> The school should have a fuel room in the building, or a convenient shed outside for the storage and protection of fuel. If outside, the fuel room should be substantial, securely locked, and painted the color of the schoolhouse.

In the Rural School Standards of Nebraska we find:[6]

> The Fuel Room. When building a new schoolhouse the cost of this room is much less than a separate coal house and the convenience of it is worth much. When a basement is provided, the fuel room should be in the basement.
>
> The fuel room should have a concrete floor. The door to the room should be close fitting so that dust does not enter when coal is being placed in the fuel room. This room should be lined with heavy lumber, behind which should be building paper, so that dust may not escape.

The greatest agreement among the score card on the items fuel house, barn and garage, apparently is that they are not necessary, as they are not included in most of the cards.

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[4] Official Score Sheet for Rural Schools (State Department of Education, Cheyenne, Wyoming. Bulletin No. 2, Series B. 1931).

[5] Burl Bryant and S. M. N. Marrs, Texas Rural School Standards (Department of Education, Austin, Texas. November, 1930).

[6] Op. cit.

CONCLUSIONS

It has been the purpose of this chapter to determine how the score cards used by the state departments compare in the use of the items: coal house, fuel house, garage, barn, and toilets.

These conclusions are drawn from the tabulations of the chapter.

I. There is no agreement as to the number or value of the items on the score cards.

II. Most of the score cards do not mention coal house, fuel room, garage, or barn.

III. It is evident that the score cards do not agree as to what kind of toilets should be used, or where they should be located.

IV. Not all of the score cards agree that the school should maintain separate toilets for boys and girls.

V. Specifications for barns, coal houses and garages are not given in the score cards.

CHAPTER VI

SUMMARY, CONCLUSIONS, RECOMMENDATIONS, AND NEW SCORE CARD

Summary

This investigation has, as its main objectives, the comparative study of the score cards used by state departments in scoring rural schools on a state-wide basis and some suggestions for improving score cards that now exist. The purpose is:

1. To present an analysis of the score cards now used.
2. To compare the findings of this study with previous studies.
3. To make recommendations which should aid state departments in the construction of score cards.
4. To construct a score card which will efficiently score rural school buildings and be reliable, regardless of who scores the building.

The greater part of the data were taken from twenty-nine score cards and letters received from the forty-eight state departments with additional suggestions from previous studies listed on pages 3 and 4.

The scope of this study was nation-wide, including an investigation of 29 score cards used on state-wide basis.

The following types of data were assembled from the various sources:

1. The degree of uniformity of score cards.
2. The method of scoring used on score cards.
3. Frequency of appearance of terms on the cards.
4. Type of score card used.
5. Directions or lack of directions for scoring schools.
6. Type of school scored.

7. Purpose of scoring rural schools.
8. Form of score card.
9. Information given to patrons of school on score card.
10. Scale of points used on score cards.
11. Opinions from administrators, teachers, county superintendents, physicians and architects as to the value of items and total points on score card.
12. Reliability of score cards.

In summarizing, there are many topics which the writer has considered.

1. Only twenty-nine state departments out of forty-eight score rural school buildings on a state-wide basis. (Table III, page 10; Table IV, page 14; Table V, page 15.)
2. Most of the score cards now in use have been constructed by the state departments where they are used. Hence they consist of various number of pages and forms. The most common form is the booklet type. Usually the county superintendent scores the rural school building. (Table IV, page 14; Table VI, page 17.)
3. But three state departments use score cards to determine whether or not rural schools have met the requirements for state aid. (Table II, page 9.)
4. Various methods of scoring are used. Some score cards use a given number of points for each item. Others use the questionnaire type answered by "yes" or "no." Score cards do not contain the same number of items. (Table V, page 15; Table VI, page 17.)
5. There are very few score cards sold by publishing companies now in use by state departments.

6. Geographic location or position in nation does not determine whether or not state officials use score cards. (Table III, page 10; Table II, page 9.)

7. The score card of the booklet type with directions for its use would seem to be the most desirable type. However, but four states of twenty-eight using a score card (15%) use the booklet with explanations for its use. (Table VI, page 17.)

8. The score cards are not uniform in size, shape or number or value of items scored. (Table IV, page 14; Table VI, page 17.)

9. A desirable score card is one which measures the school building efficiently and in such a way that it is thoroughly understandable by school patrons will give the same results regardless of the person who does the scoring of the building.

10. If there has been cooperative effort, it is not evident by results on the part of state officials to construct a score card suitable to several states. (Table VI, page 17.)

11. Apparently the 1,000 point scale is the most popular scale, as ten out of the twenty-nine state departments used that number. (Table VI, page 17.)

Conclusions

1. There is practically a complete lack of uniformity in the score cards used by state departments in scoring rural schools. This is evidenced by:

   a. Official capacity of persons signing score cards. (Pages 11, 12, 13 and 14.)

b. Dimensions and forms of score cards. (Table VI, page 17.)

c. Items listed on score cards. (Table VI, page 17; Table VII, page 23; Table VIII, page 28; Table IX, page 42.)

d. Number of items scored. (Table VI, page 17; Table X, page 42.)

e. Purpose of score cards. (Table II, page 9; Table III, page 10.)

f. Lack of uniformity in printing of cards. (Table VI, page 17.)

g. Lack of uniformity in assigning value to like items on score cards. (Pages 23, 24, and 25.)

2. There is a need for a central clearing agency to bring some semblance of order out of the lack of uniformity now prevailing in methods of scoring rural school buildings. This is shown by:

a. The many different kinds of score cards used. (Table VI, page 17.)

b. The variety of persons signing the score cards. (Pages 11, 12, 13 and 14.)

c. The lack of uniformity of items included in the cards. Table VI, page 17; Table VII, page 23; Table VIII, page 28.)

d. The lack of uniformity in assigning the same number of points to identical items. (Pages 23, 24, and 25.)

e. The variety of dimensions and form of score cards. (Table VI, page 17.)

f. The different systems of scoring used. (Table V, page 15.)

g. The numerous items listed having similar meanings. (Table VII, page 23; Table IX, page 42.)

3. There is a lack of definite items on score cards. This is indicated by:

a. Numerous items listed on one score card that are not mentioned on another. (Table X, page 42; Table VIII, page 28; Table VII, page 23.)

4. There are certain items which are more desirable than others:
   a. Many items are not included in all score cards. (Table X, page 42; Table VIII, page 28.)
   b. School patrons ask for definite information.
5. Certain dimensions and form are more desirable from convenience and economic standpoints. This shown by:
   a. Lack of uniformity in dimensions and form. (Table VI, page 17.)
   b. Certain dimensions file more easily than others.
   c. Certain dimension cards can be cut economically from certain types and grades of paper.
   d. Large single sheets or cards are not conveniently carried or filled out.
6. Scores should have more comprehensive meaning. This is disclosed by:
   a. Lack of identical points on cards. (Table V, page 15.)
   b. The diversity of opinions given to school patrons by the report. (Pages 1 and 2.)
   c. The lack of definite directions for assigning points to a given item when it is not up to standard. (Pages 14 and 15.)

Recommendations

There are many recommendations deemed advisable:

1. A more uniform scoring system should be adopted by state departments with the view of aiding the solution of the problem of the improvement of rural school buildings.

2. A more uniform interpretation of score card points should be developed so that they will have meaning which is more comprehensive to school patrons.
3. The score card should be simple in form and constructed to show progress and improvement.
4. The six by nine inch booklet type score card is a desirable size. It will file readily and is easily carried.
5. An attempt should be made to gain uniformity in items listed on score cards. Probably a plan should be devised so that a school may be given extra points if it possess desirable items beyond those listed on the score card.
6. A plan of instructions for scoring each card should accompany each score card. This plan should be definite, impersonal, concise, and usable. This implies that the score will be the same regardless of who uses the score card.
7. Twice a year is deemed the more desirable of the frequencies when schools should be scored. This will enable each year's progress to be summed up at the close of the year.
8. The more important items are: site, building, service systems, and toilets.
9. Score cards should contain spaces to record more than one survey.
10. Percentile profile graphs are advisable in showing the school progress in improving its buildings and grounds.
11. A uniform purpose in scoring schools should be chosen.
12. To improve existing conditions, score cards which have been standardized should be used.

How the Score Card was Devised

After analyzing the score cards used by twenty-nine state departments the writer was convinced that a score card could be constructed which would be less liable to variation due to differences of opinion of the scorers. As a result of the systematic study a card has been constructed by analyzing the group tabulations of score cards used by twenty-nine state departments and the commercial cards devised by E. J. Ashbaugh and P. R. Stevenson, E. L. Holton and V. L. Strickland, G. O. Strayer and N. L. Engelhardt, and Julian Butterworth.

The major items on these cards have been used in devising this score card. The major items are: site, building, service system, outbuildings, and toilet.

The points assigned to each major item were found by establishing the median number of points on twenty-nine state score cards and four commercial score cards, for each item. This median was assigned as the number of points for each major item.

There is a marked similarity of points, for each major item, on the score cards, when all cards are classified on the same number of points.

The points assigned to each sub-item were also found by using the median score of all cards using that item. The sub-items used on this score card are taken from the state score cards and the commercial score cards.

The score card as it is now devised represents the opinions of a large number of people who are acquainted with school problems. It includes only those things commonly thought essential to a good school building.

Before attempting to use the score card one should study the manual

carefully and become acquainted with the scoring procedure used.

After the building has been scored it will be possible to gain a general idea as to whether or not the building is satisfactory by checking it with the standards set up in this score card.

In devising this score card certain factors were kept in mind. These were:

1. To define three types of buildings as definitely as possible.
2. To equate points for sub-items as far as possible in terms of relative importance.
3. To arrange like items together so that those items outside the building may be scored before entering the building.

Any part of the score card may be used separately if desired.

TABLE XI

A SCORE CARD FOR RURAL SCHOOLS

Name of School _____ County _____ State _____

Scorer _____ Date _____ Dist. No. _____

I. Site	200	
Central location		40
Accessible and suitable		30
Environment		30
Elevation and drainage		25
Size and shape		30
Landscaped		10
Walks		8
Approach		7
Playground		20

TABLE XI (continued)

A SCORE CARD FOR RURAL SCHOOLS

II.	Building exterior	235	
	Position on site		25
	Orientation		35
	Type		35
	Foundation		25
	Roof		10
	Walls		10
	Entrances		15
	Material		10
	Paint		10
	Condition		35
	Appearance		25
	Building interior	315	
	Light		40
	Floor		20
	Size		25
	Shape		25
	Adjustable shades		25
	Walls and ceiling		30
	Blackboard and chalf trough		20
	Color scheme		35
	Windows		35
	Auditorium		20
	Basement		20
	Cloakroom		20
III.	Service System	155	
	Approved heating system		50
	Approved ventilating system		40
	Artificial lights		20
	Water Supply System		
	Well on grounds		20
	Sanitary drinking supply		15
	Provision for washing		10
IV.	Out Buildings	95	
	Toilets		
	Type		20
	Separate for boys and girls		20
	Adequate		10
	Seclusion		10
	Sanitation		10
	Fuel house or room		10
	Barn		10
	Garage		5

EXPLANATION OF STANDARDS

Score

I. Site (200)

A. Central location. 40
The schoolhouse should be located near the center of the district. It should not be more than two miles distant from the farthest home, if the children have to walk, and six miles if the children are transported. If the schoolhouse is located one mile from the center of the district, subtract 6 2/3 points from possible score. If two miles from center, 13 1/3 points should be subtracted, etc. If six miles from center, 0 points must be allowed.

B. Accessible and suitable. 30
The schoolhouse should be accessible to all the pupils. It should be convenient to main and cross roads. The site should be suitable for school purposes. For each mile the school is distant from an improved road subtract 5 points from total possible score.

C. Environment. 30
1. Should not be located near farm houses or barnyard.
2. Free from noises caused by manufacturing plants, railroads, cotton gins, etc.
3. Not adjacent to open ditches, high cliffs or dangerous bodies of water.
4. Should not be placed on hills where site would be exposed to winter winds and storms.
5. Not be located near fire hazards.
6. Pleasing natural view and surroundings.

If school should be located near any of the above mentioned defects, subtract 5 points for each one from total possible score.

D. Elevation and drainage. 25
The grounds should lie so that the water drains away from the building and entire site. The soil should be quick drying, fertile soil. Subtract three points each for: poor drainage, stony soil, sticky clay soil, poor elevation.

E. Size and shape. 30
The site should contain at least one acre. It should be rectangular in shape. If ground is less than one acre, deduct 4 points for each twenty square rods deficient. If the shape is greatly out of proportion to the ratio of 3 to 2 or 3 to 1, deduct 5 points from score. If the school grounds contain 320 square rods add 10 points.

F. Landscaped. 10
The site should be beautified with trees, flowers and shrubs. The lawn should be well sodded. The walks and buildings arranged according to approved principles of landscaping. Allow four points for trees, two for shrubs and flowers, two for lawn, and two points for the arrangement of buildings and walks. If the lawn is kept mowed, the trees and shrubs trimmed, add 5 points.

G. Walks. 8
Gravel, cement, brick, or cinder walks from entrance of grounds to building. From building to outbuildings and well. Subtract two points for each walk needed which is not constructed.

H. Approach. 7
The site should have a suitable approach, so that the pupils will not be in danger when entering or leaving conveyences. It should be possible to transport the children to the main walk in stormy weather. Deduct five points if children are subject to danger from passing traffic when entering or leaving cars, two points if children cannot be delivered to main walk in stormy weather.

I. Playground. 20
The playground should be attractive and adapted to play. The arrangement should be such that games will not interfere with each other. The playing site should be level, smooth and well drained. It should contain at least 4 pieces of standard playground apparatus. If games interfere with each other deduct 5 points. If site is not level and well drained deduct 5 points. Deduct one point for each piece of playground apparatus which is lacking. Add one point for each piece of playground apparatus more than four.

II. Building Exterior (235)

A. Position on site 25
The building should be placed near the front of the site so that it will not interfere with the playing space. If placed to interfere with playing space deduct ten points.

B. Orientation. 35
The classroom should be placed so as to receive the direct sunlight sometime during the day. The light exposure should not be direct during the entire day. If the building is lighted from left and rear, take the pupils left as orientation. If building is cross lighted allow a score of five points. If building is lighted from two directions allow a score of 20 points. If building has east orientation or facing with a slight angle to the south add 6 points, if building is lighted from this direction only.

C. Type. 35

The building should be of the cottage type. It should be rectangular in shape. It should not be of the "box-car" type. For modern cottage type structures allow full score, if built in accordance with an approved plan. If remodeled to meet approved plans allow full credit. For "box-car" type deduct 20 points from full score. For unapproved plans deduct 10 points.

D. Foundation. 25

The foundation must be well constructed of material commonly used for foundations and in a good state of repair. Unless a basement is included the foundation should be from 18 to 24 inches in height. If foundation is less than 18 inches in height deduct 5 points for each six inches or fraction thereof that the foundation is below standard. If the foundation is not weather tight deduct 6 points. If crumbling and large holes appear in it deduct 15 points. If well constructed of reinforced concrete add 5 points.

E. Roof. 10

The roof must be well constructed and in good state of repair. If leaky deduct 5 points. If constructed of good shingles give full score. If constructed of paper deduct 5 points. If made of tile or slate add five points.

F. Walls. 10

Walls must be well constructed, tight and in good state of repair. Holes in the siding or mortar out from between brick deduct 3 points. If walls are well constructed allow full score.

G. Entrance. 15

1. Each building should have a substantial vestibule, porch, or stoop. It should be at least 8 by 10 feet. Small and well constructed steps should lead to the entrance.
2. All entrance doors should open outward.
3. If auditorium is located in the basement, an outside door should be conveniently located allowing use of community room during school hours without disturbing the pupils.

If doors do not open outward deduct 10 points. If building is not provided with porch or stoop deduct 5 points.

H. Material. 10

The material allowed for construction may be brick, cement, stone, hollow tile, wood or stuccoed wood or stone. Building should be constructed in accordance with approved fire resistance methods. First quality lumber is entitled to full score. Brick in good condition add 5 points.

I. Paint. 10

The building should be painted in an appropriate color scheme. The paint should be in good state of preservation. The paint should be renewed often enough to preserve the building and to present a pleasing appearance.

I. Paint (continued).
If paint is lusterless and dull but covering the entire surface deduct 2 points. If paint is scaling off and some place without paint deduct 5 points. If paint is almost entirely off the building deduct all points.

J. Condition. 35
The building should be kept in good state of repair. Deterioration should not be permitted to show. Broken window panes deduct one point each. Broken steps deduct 5 points. Marks or other defacing matter on building deduct 2 points. If building shows much depreciation deduct 10 points.

K. Appearance. 25
The general appearance of the building should be pleasing to the eye. The building should be well proportioned and symmetrical. Do not put gadgets on the building for sake of ornaments. The building should differ in appearance and design from the building in that vicinity. The building should form a natural part of the surroundings. If the building is out of proportion or balance in dimensions or appearance deduce ten points. If one part of building is out of proportion to the rest of the building deduct five points.

III. Interior (315)

A. Light. 40
The glass area should be equal to not less than one-fifth of the floor space. The desks should be placed in the room so that the light falls over the left shoulder of the pupils. If light comes from the north the glass area should be at least one-fourth the area of the floor. If the glass area is equal to only one-sixth the floor space deduct 8 points. If equal to only one-seventh of floor space deduct 16 points.

B. Floor. 20
The floor should be in good condition. It may be constructed of pine or other hard wood or cement. Floors must be solid and level. The flooring boards should be laid close together so that large cracks do not appear. The floor should be waxed or oiled. If the floor is not level, or in poor condition, or not solid, has large cracks in it deduct 4 points for each defect mentioned. If floor is constructed of maple or oak and polished add 5 points.

C. Size. 25
The room should be of such a size that when filled to capacity each pupil will have a minimum of fifteen feet of floor space, two hundred cubic feet of air space. Deduct one and one-half points for each square foot floor space below minimum for each child. Deduct two points for each ten cubic feet of air space below standard. For 20 square feet of floor space for each pupil add 5 points. 250 cubic feet air space, add 5 points.

D. Shape of room. 25
The room should be rectangular in shape. The length of the room should not exceed twice the height. The room should not be so wide that the direct rays of the sun will not reach the farthest side of the room. The width of the room should be in proportion to the length as 2 is to 3. Deduct ten points if room is square, or nearly square.

E. Adjustable shades. 25
All windows should be fitted with translucent, adjustable window shades. The shades may match the tint of the room. The shades should be adjustable from both top and bottom. If shades are dark green in color and fasten at the top deduct fifteen points. If other opaque color and are adjustable at both top and bottom deduct ten points. Translucent shades fastened at the top deduct eight points.

F. Walls and ceiling. 30
The walls and ceiling should be clean. They may be constructed of smooth or rough finish material. The ceiling should not be less than eleven feet in height nor more than thirteen feet. If plaster is falling off walls or ceiling deduct fifteen points. If walls and ceiling are dirty deduct five points. If ceiling is less than eleven feet or more than thirteen feet in height deduct five points.

G. Blackboard and chalk trough. 20
At least thirty linear feet of slate or composition blackboard is the minimum for each room. One section should be placed twenty-four or twenty-six inches from the floor. The blackboards should be placed in the front of the room and not between windows. Deduct one point for each linear foot blackboard if below minimum standard. Deduct two points if blackboards are placed too high for primary children.

H. Color scheme. 35
The walls and ceiling should be tinted. The walls may be tinted a buff color and the ceiling an ivory tint. Other colors are satisfactory if they do not reflect too much light and cause a glare. The paint should be kept clean. The colors chosen should harmonize. If walls and ceiling need tinting deduct ten points. If tinted in dark or not harmonizing colors deduct ten points. If tinting or paper is dirty deduct five points.

I. Windows. 35
Window sills should be not less than three feet above the floor. Window sashes should be adjustable. Sashes should have provisions for locks. Windows used for lighting purposes should be placed in one side of the building. Windows for ventilation are to be placed toward the top of the walls. Windows on two sides and rear deduct twenty-five points. For window sills less than three feet above floor deduct five points.

J. Auditorium. 20
The building should contain a room which may be used as a common meeting place of the community. If a room other than the classroom is available add ten points. If classroom is only auditorium allow ten points.

K. Basement. 20
Each building should have a basement. It should not be more than four feet below grade. The basement should be the entire size of the building. The basement should be kept as clean as the rest of the building. It should be tinted in accordance with the color scheme of the classroom.

L. Cloakroom. 20
The cloakrooms should be convenient for the pupils and easily supervised by the teacher. It should be well ventilated. Enough hooks placed eight inches apart to accommodate maximum capacity of room should be in the cloakrooms. Hooks on classroom wall deduct sixteen points. If separate cloakrooms for boys and girls, heated, lighted and ventilated add five points; lockers for each child add an additional five points.

III. Service Systems (155)

A. Heating system. 50
The heating system must be large enough to maintain an even temperature. The heating system must have a good draft control. Ventilating heater or jacketed stove with shafts for bringing in fresh air and carrying out the foul air give full credit. Stove without jacket or screen and without ventilation provisions deduct twenty-five points. Basement furnace with provision for impure air exhaust add ten points.

B. Ventilation. 40
Each school building should have a provision for ventilation. If building has fresh air inlets and impure air outlets give full score. If windows without window boards are used for ventilation purposes deduct fifteen points.

C. Artificial lights. 20
Electric or some kind of artificial lights should be provided. All parts of the room should be illuminated. If electric or gas lights add five points.

D. Water supply
1. Source. 20
Tested well on school grounds, full score.
Neighbor's well, deduct ten points.
Supplied with running water add ten points.

2. Drinking. 15
Closed jar with bubbling faucet or individual cups gives full score. Bubbling fountain on water main add four points. Open pail deduct twelve points.

3. Washing. 10
Wash basin at proper height in warm room. Soap, and individual towels or paper towels will give full score. Wash basin in vestibule deduct four points. Porcelain bowl with drain, soap and individual or paper towels add five points.

IV. Outbuildings (95)

A. Toilets.
Indoor toilets should be provided wherever possible. They may be either water flushed or chemical. They should be well ventilated. If outdoor toilets are used they should be placed on opposite corners of the grounds and should be screened against flies and from view. The toilets should meet all the provisions for privacy.

1. Type. 20
Chemical or septic tank, full score. Out-door pit deduct five points. Flushing type add five points.
2. Placement. 20
Boys and girls toilets must be separate even to approaches. If toilets are not separate deduct full score for placement.
3. Adequacy. 10
One seat for each fifteen pupils, full score. One seat for each ten pupils add two points.
4. Seclusion. 10
Entrances to toilets or toilet rooms should be screened from view. Full score. Stalls with swinging doors for each seat add three points.
5. Sanitation. 10
Well lighted, clean and ventilated, disinfected, requires full score. Not lighted deduct two points, not ventilated deduct two points, not disinfected deduct two points.
6. Fuel house or room. 10
May be in basement or in a separate building if it is conveniently located. If in basement and is dust proof allow full score. If outside and a substantial structure--painted in accordance with color scheme of building--deduct three points from total score. If not substantial deduct six points.
7. Barn. 10
A barn should be provided for the horses of the pupils wherever pupils ride or drive horses to school. Barn in good condition and painted allow full score if kept clean. If not in good condition or not clean deduct six points.
8. A garage should be provided for the teacher or pupils wherever cars are driven to school. If a substantial building and painted in accordance with the color scheme of the building allow full number of points.

RATING OF SCHOOL BUILDINGS

A building which has a total score of 950 or above is ranked above average; below 950 and above 850, average; below 850 and above 550, below average; 550 and below, rejectable.

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APPENDIX

APPENDIX A

Saffordville, Kansas,
May 2, 1933.

Commissioner of Education,
Providence, Rhode Island.

Dear Sir:

I am making a comparative study of the score cards used by the State Department in each state in scoring rural school buildings.

Will you please cooperate with me in this study by sending me a copy of the score card used in your state.

Thanking you for assistance and cooperation in this study, I am

Sincerely yours,

(C. R. Colyer)

APPENDIX A (continued)

Saffordville, Kansas,
May 22, 1933.

State Superintendent of Public Instruction,
Denver, Colorado.

Dear Sir:

I am making a comparative study of the score cards used by the State Department in each state in scoring rural school buildings.

On May 2 I wrote you asking for a score card used by your department for this purpose. To date I have not received a reply. Will you not cooperate with me in this study by sending the card which I have requested. The study will not be complete without your reply.

Cordially yours,

(C. R. Colyer)

APPENDIX A (continued)

Saffordville, Kansas,
June 15, 1935.

State Superintendent of Public Instruction,
Jefferson City, Missouri.

Dear Sir:

I am making a comparative study of the score cards used by the State Department in each state in scoring rural school buildings.

On May 2, and on May 22, I wrote you asking for a score card used by your department for this purpose. To date I have not received a reply. Will you not send a copy of the score card which I have requested. The study will not be complete without your reply.

Sincerely yours,

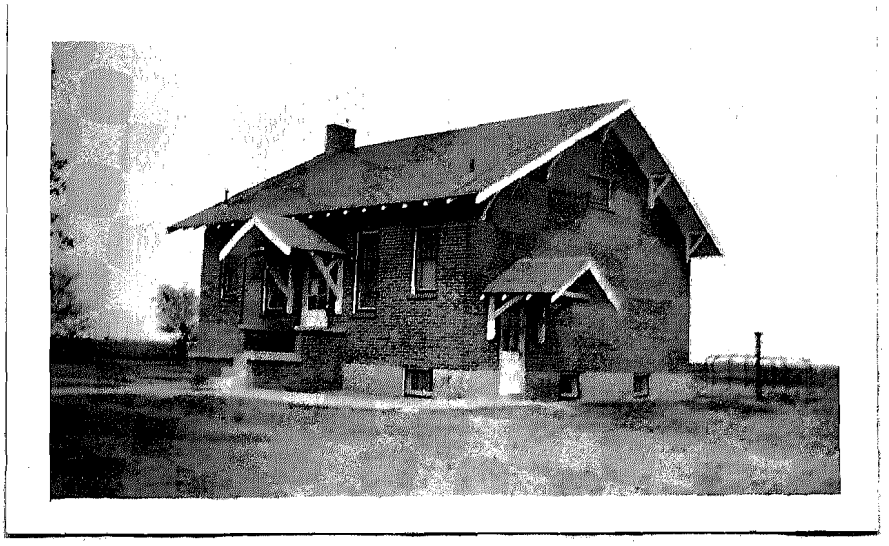
(C. R. Colyer)

APPENDIX B

NAMES AND ADDRESSES OF STATE SUPERINTENDENTS OF PUBLIC INSTRUCTION

State Superintendents	City	State
1. Mr. A. F. Harman	Montgomery	Alabama
2. Mr. H. E. Hendrix	Phoenix	Arizona
3. Mr. C. M. Hirst	Little Rock	Arkansas
4. Mr. Vierling Kersey	Sacramento	California
5. Miss Inez Johnson Lewis	Denver	Colorado
6. Mr. Ernest W. Butterfield	Hartford	Connecticut
7. Mr. H. V. Holloway	Dover	Delaware
8. Mr. W. S. Cawthon	Tallahassee	Florida
9. Mr. M. L. Duggan	Atlanta	Georgia
10. Mrs. Myrtle R. Davis	Boise	Idaho
11. Mr. Francis G. Blair	Springfield	Illinois
12. Mr. Roy P. Wisehart	Indianapolis	Indiana
13. Miss Agnes Samuelson	Des Moines	Iowa
14. Mr. W. T. Markham	Topeka	Kansas
15. Mr. W. C. Bell	Frankfort	Kentucky
16. Mr. T. H. Harris	Baton Rouge	Louisiana
17. Mr. Bertram E. Packard	Augusta	Maine
18. Mr. Albert S. Cook	Baltimore	Maryland
19. Mr. Payson Smith	Boston	Massachusetts
20. Mr. Webster H. Pearce	Lansing	Michigan
21. Mr. E. M. Phillip	St. Paul	Minnesota
22. Mr. W. F. Bond	Jackson	Mississippi
23. Mr. Charles A. Lee	Jefferson City	Missouri
24. Miss Elizabeth Ireland	Helena	Montana
25. Mr. Charles W. Taylor	Lincoln	Nebraska
26. Mr. Walter W. Anderson	Carson City	Nevada
27. Mr. James N. Pringle	Concord	New Hampshire
28. Mr. Charles H. Elliott	Trenton	New Jersey
29. Mrs. Georgia A. Lusk	Santa Fe	New Mexico
30. Mr. Frank P. Graves	Albany	New York
31. Mr. A. T. Allen	Raleigh	North Carolina
32. Miss Bertha R. Palmer	Bismark	North Dakota
33. Mr. B. D. Skinner	Columbus	Ohio
34. Mr. John Vaughn	Oklahoma City	Oklahoma
35. Mr. C. A. Howard	Salem	Oregon
36. Mr. John A. H. Keith	Harrisburg	Pennsylvania
37. Mr. Walter E. Ranger	Providence	Rhode Island
38. Mr. J. H. Hope	Columbus	South Carolina
39. Mr. E. C. Giffen	Pierre	South Dakota
40. Mr. B. L. Harned	Nashville	Tennessee
41. Mr. S. M. N. Marrs	Austin	Texas
42. Mr. Charles H. Skidmore	Salt Lake City	Utah
43. Mr. Clarence H. Dempsey	Montpelier	Vermont
44. Mr. Harris Hart	Richmond	Virginia
45. Mr. N. D. Showalter	Olympia	Washington
46. Mr. W. W. Trent	Charleston	West Virginia
47. Mr. John Callahan	Madison	Wisconsin
48. Mrs. Katherine A. Morton	Cheyenne	Wyoming

ABOVE STANDARD



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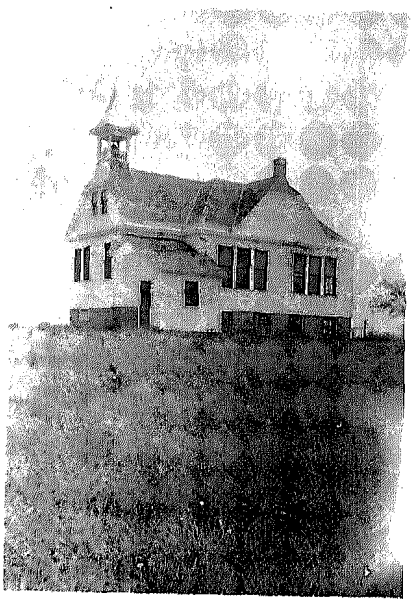

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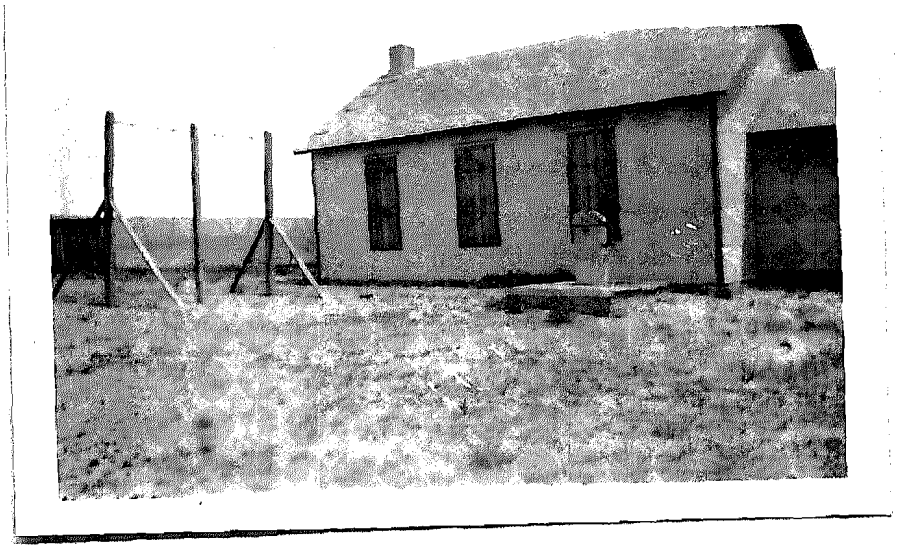

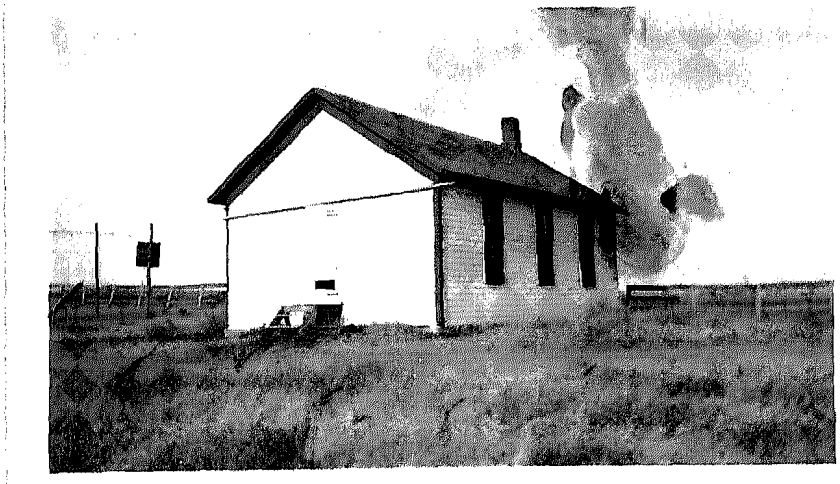

REJECTABLE