AN EVALUATION OF BOYS' PHYSICAL EDUCATION PROGRAMS IN CALLATIN COUNTY CLASS "C" HIGH SCHOOLS

By

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ABSTRACT

The general problem in this study was to evaluate the boys' physical education programs in the seven class "C" high schools of Gallatin County, Montana. It was decided that the best instrument available for this study was the Neilson-Hudson Score Card. The score card attempted to evaluate the following specific areas:

(1) The nature and extent of the facilities in each school.
(2) The different aspects of program organization, including such problems as time allotment, size of classes, health examinations, teacher load, records kept and used, and credit.
(3) The activities taught and intramural athletics.

The superintendents of each school were contacted and permission was received to make the study from all seven schools. Outdoor facilities and equipment scored low in all schools. Most schools lacked outdoor handball courts, volleyball courts, archery lanes, badminton courts, and tennis courts. It was found that most schools were quite adequate in area of school site, placement of buildings and indoor facilities. Items of equipment not in evidence in any of the schools included: buck, horse and uni-goals. Corrective room equipment was lacking in all but one school.

Most schools were weak concerning time allotment for physical education. It was usually offered only three times a week for about 50 minutes. Health examinations also scored quite low. All the schools had examinations that included check of age, height, weight, and vision, but largely only athletes were given examinations. This was usually once a year. Size of classes and teacher load scored 100 per cent in all schools. This was primarily due to the small enrollment of the schools.

All seven schools offered the following activities in physical education: American football (touch), basketball, track and field events, softball, soccer, and volleyball. All except one school offered badminton. Activities not offered at any of the schools were: golf, fencing, dancing, boxing, bowling, boating activities, squash, skiing, skating, ice hockey, and hiking and mountain climbing.

Intramural athletics were almost nil in the seven schools. Two schools had intramural basketball. One school had intramural American football (touch), ping pong, and volleyball. Five schools had no intramurals at all. All schools emphasized team sports and activities more than they did invididual and dual sports and activities.

CHAPTER I

I. STATEMENT OF THE PROBLEM

The general problem in this study was to evaluate the boys' physical education programs in the seven class "C" high schools of Gallatin County, Montana.

Specific problems considered were:

(1) To determine the nature and extent of the facilities in each school.

(2) To determine the different aspects of program organization, including such problems as time allotment, size of classes, teacher load, records kept and used, and credit.

(3) To determine the activities taught and the extent of participation in physical education classes and intramural athletics.

II. DELIMITATIONS OF THE PROBLEM

This study was delimited to: (1) The school year 1968-69, (2) seven class "C" high schools in Gallatin County, Montana (i.e. Belgrade, Holy Rosary, Manhatten, Manhatten Christian, Three Forks, West Yellowstone and Willow Creek), (3) the physical education programs for boys in the ninth, tenth, eleventh, and twelfth grades, (4) the elements of the score card used which include: facilities, program organization and program activities. See Appendix.

III. JUSTIFICATION OF THE STUDY

Physical education is an integral part of the total education

process and has as its aim the development of physically, mentally, emotionally, and socially fit citizens through the medium of physical activities which have been selected with a view to realizing these outcomes.[1]

Physical fitness and physical education have been and are a vital concern of everyone. Physicians, physical education instructors, coaches, the federal government, recreational and physical fitness groups and organizations such as the YMCA, YWCA, AAHPER, and many others too numerous to mention have all expressed opinions on American "easy living" and lack of physical fitness. Fitness is a definite prerequisite for a healthy, happy, longer life. To quote Ray O. Duncan:

> "Physical fitness is total body fitness, and just as health is total and represents "physical" and "mental", likewise "physical fitness" means total fitness - physical, social, emotional, mental."[2]

It was felt that this study could aid in gaining a better understanding of the work that is being done in physical education in the class "C" high schools of Montana, showing areas of strength and weakness.

It is hoped that this evaluation study will possibly generate new ideas and give added emphasis to this area of education. It is also hoped that this evaluation may serve as a guide for the improve-

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[1]Charles A. Bucher, Administration of School and College Health and Physical Education Programs. C. V. Mosby Company, 1967, pp 52

[2]Ray O. Duncan, "Physical Fitness Tests" Journal of Health, Physical Education and Recreation. 28:21, 1957

ment and upgrading of the physical education program. The persons concerned with this evaluation should acquire a better understanding and insight into the program and the work that is being carried on. The author is of the opinion that this study is a pioneer step in improving physical education in Montana High Schools if there is a need for improvement.

IV. RESEARCH METHOD

Following selection of the problem it became necessary to determine what techniques or tools should be used to gather the data needed. It was decided that the best instrument available for this study was the N. P. Neilson and Don R. Hudson score card.[3] See Appendix.

This score card is a revision of the one begun in February, 1929, at the first regional conference on health and physical education, held at Colusa, California. Under the direction of N. P. Neilson, then State Supervisor of Physical Education, twelve regional conferences were held and at each of these a discussion of the score card problem brought forth many valuable ideas which were immediately incorporated. As each possible unit was considered for inclusion in the score card, it was checked against the following criteria:

1. Does the unit have validity?
2. Does the unit justify being included in terms of objectives?

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[3] N. P. Neilson and Don R. Hudson, A Score Card for the Evaluation of Physical Education Programs for High School Boys. California State College, Hayward, California, 1967

3. Does the unit justify its inclusion in terms of the concepts of physical education which are generally accepted?

4. Does the unit allow the school an opportunity to improve its score?

5. Does the unit encourage the school to improve its score?

The original score card for high school boys was published in 1931 by the California State Department of Education as Bulletin No. E-2. In 1949, this score card was revised by Dr. N. P. Neilson and Vaughn L. Hall and was published by the Department of Public Instruction, State of Utah. The present revision by Dr. N. P. Neilson and D. R. Hudson includes changes made necessary by experience gained in the use of the card over a long period of time. The score card is intended for voluntary use by schools as a check list to locate particular points where improvement in their programs can be made.

> "The value of the score card lies not so much in the total score, as in the analysis of the detailed score in each unit. Upon completion of the score card summary sheet, the principal and physical education instructors should convene with the scorer to discuss the results and plans for improvement. It is, therefore, hoped that this score card will be found useful in stimulating self-improvement of schools, rather than in comparing one school's standards with that of another. Its use should also result in suggestions to the authors for improvement in the score card itself."[4]

Albeit this score card may be lacking in some aspects of complete-

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[4]N. P. Neilson and Don R. Hudson, A Score Card for the Evaluation of Physical Education Programs for High School Boys. California State College, Hayward, California, 1967

ness, it is felt that immense range and detail have been included in its scope. It is evident that there is no one method that is flawless in evaluating all phases of physical education programs. The excellence and quality of the Neilson-Hudson score card seems to warrant its use in this study.

Some imperfections as felt by the authors include (1) some standards may be too high, others possibly too low, (2) the field of physical education is so new in its modern development that even experts find real difficulty in coming to a general agreement on the major elements involved, (3) the judgements and thinking of those involved in the construction of this score card may not agree or reflect the opinions of other experts in the field. The evaluation attempts to obtain information considered important by the author and the Department of Physical Education at Montana State University.

Upon receiving permission from the superintendents of each of the seven class "C" high schools in Gallatin County, a personal visit was made to each for the purpose of obtaining information required on the score card. The author personally scored each school with the cooperation of the superintendents, principals, and men physical education instructors. Range of time required to score each school was approximately one to two days. Care was taken not to disrupt or conflict with obligations and schedules of the school staff.

The method of scoring in each case was based upon instructions in the score card itself, plus any clarification needed. Objectivity

was stressed in all areas of scoring. Each element or unit has a point value which is scored according to the degree to which the unit corresponds with the standards outlined in the score card.

To avoid any possible focused attention, the names of schools and people used to conduct this evaluation were omitted. There was no specific reference to any school. Instead the general titles of School A, B, C, D, E, F, and G were used. In compiling the totals, all scores and percentages were rounded off to the nearest whole number. The points scored by each school were compared with the possible points obtainable, and percentages have been computed for each division of the score card and for the total score of each school.

It was felt that the findings of this study revealed the strong points as well as weak points for each school. High scoring in a division or divisions of the score card indicated strong points for the school, while low scores indicated weaknesses. There was definitely room for improvement in most areas. An over-all comparison of the seven schools was prepared to show the strengths and weaknesses of each school, one with another.

V. RELATED STUDIES

Many studies have been made concerning the evaluation of physical education programs. Studies have been conducted on the elementary school level, the secondary school level, and on the college level. Some studies have evaluated girls' physical education programs only, others boys' physical education programs only, still others the

instructional program itself. A large amount of these studies have been completed in Utah schools. To my knowledge, this study was the first of its kind to be conducted in Montana schools.

Arnett Study. Glen W. Arnett chose to develop a procedure or instrument for evaluating physical education programs in the elementary schools.[5] It was felt that to measure the desired information objectively a score card must be utilized. Here again, the model chose by Mr. Arnett to serve as a guide for his study was the Neilson score card for evaluating physical education programs for high school boys. Necessary revisions were made so that the card would be geared for the elementary program. Check lists were made for elementary school programs, including all elements of physical education. These were then sent to twenty State Directors of Health, Physical Education and Recreation in the United States. Sixteen answers were received. Further changes were considered in the check lists and additional suggestions were received at a convention of State Directors of Health, Physical Education and Recreation held at St. Louis, Missouri.

Cooper Study. In 1958, Gene Cooper completed a study of physical education programs in twelve elementary schools of Boise, Idaho.[6] An attempt was made to discover the strengths and weaknesses

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[5]Glen W. Arnett, "A Procedure for Evaluating Physical Education Programs in the Elementary Schools" Unpublished Master's Thesis, University of Utah, 1946

[6]Gene Cooper, "An Evaluation of Physical Education Programs," Unpublished Master's Thesis, University of Utah, 1958

in the programs and to make recommendations which might lead to improvements. Some important conclusions of this study are as follows:

1. The Neilson-Arnett score was a useful instrument for evaluating physical education programs in elementary schools.
2. The physical education teachers and the principal will find the score card useful as a means of gathering data for self-evaluation.
3. A study of the data seemed to indicate that records kept and used by the schools were inadequate.
4. Generally, the principals of the schools thought highly of their physical education teachers.

Lundquist Study. David Ross Lundquist gathered information while evaluating physical education programs in eight junior high schools in Salt Lake City, Utah.[7] Three steps in procedure were utilized: (1) the use of the N. P. Neilson and Vaughn L. Hall score card, (2) a personal survey of eight junior high schools in Salt Lake City, Utah, (3) an analysis of strengths and weaknesses of their programs, and (4) recommendations for their improvement.

The main conclusions of the Lundquist study were:

1. A revised version of the Neilson-Hall score card was a useful instrument for evaluating physical

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[7]David Ross Lundquist, "An Evaluation of Boys' Physical Education Programs" Unpublished Master's Thesis, University of Utah, 1960

education programs in junior high schools.

2. Principals as well as physical education teachers will find the score card useful as a means of securing data for self-evaluation.
3. Outdoor activity areas were limited in many cases due to lack of adequate area of the school site for the enrollment involved.
4. The attendance of teachers at professional meetings was discouraging, insofar as these meetings hold hopes of improving the teaching profession through education and participation.
5. Supplies (general) were lacking in both variety and extent in many of the schools.

Garrison Study. John R. Garrison conducted an evaluation of the boys' physical education programs in the four senior high schools in Salt Lake City.[8] It was felt that to measure the desired information objectively a score card must be utilized. Here again the N. P. Neilson and Vaughn L. Hall score card was used. Specific problems attacked were: (1) to determine the professional preparation, physical fitness, and teaching efficiency of the instructional staffs, (2) determine the nature and extent of the facilities in each school, (3) determine the different aspects of program organization, including

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[8]John R. Garrison, "An Evaluation of Boys' Physical Education Programs in Salt Lake City High Schools" Unpublished Master's Thesis, University of Utah, 1963

such problems as teacher load, time allotment, and size of classes, (4) determine the activities taught and the extent of participation in physical education activities, and (5) determine the number and type of professional magazines and books available in each school.

The conclusions formulated by Garrison were:

1. The Neilson-Hall score card was a useful instrument for evaluating the physical education program in the senior high schools.
2. Physical education teachers, principals, and administrators will find the score card useful as a means of self-evaluation of their programs.
3. Most of the physical education instructors were not members of more than one or two professional organizations.
4. Outdoor facilities scored low in most schools due to lack of adequate area of the school site for the enrollment of the school.
5. Supplies for the prevention and care of injuries were low in many areas.
6. The number of pupils enrolled in physical education classes was low but was meeting state requirements.
7. Health examinations by a physician are required of all sophomore boys participating in athletics. No provisions for examination are made for boys participating in intra-

mural athletics.

8. The physical examination of pupils by the physical education department is good on certain items (age, height, weight, and vision). Examination in other items would be considered inadequate.
9. Corrective glasses for boys in physical education is almost nonexistent in the four high schools.
10. The teaching load of the physical education instructors was found to be quite heavy. All physical education instructors coach varsity athletics after their regular teaching schedule.
11. The instructional period in all of the schools was found to be very limited in scope. Only a few basic activities were being offered.
12. The intramural program in the high schools is almost nonexistent.
13. The interscholastic athletic program is about average in all of the high schools. It is made up largely of the traditional activities.
14. There is no dancing program for boys being offered in any of the high schools.
15. Professional magazines and professional books were, on the whole, adequate. Certain areas of the physical education libraries could be strengthened.

McCraw Study. Lynn W. McCraw did a study concerning the principles and practices for assigning grades in physical education.[9] As a result of her study she came up with a proposed plan for grading. This was set up as follows:

Components	Weightings	Instruments
Attitude in terms of Attendance Punctuality Suiting out Participation	5-25%	Attendance and other records Teacher observation
Skill in terms of Form in execution of skill Standard of performance Application in game situation	20-35%	Objective tests Teacher observation Student evaluation
Physical fitness with emphasis on Muscular strength and endurance Cardiovascular-respiratory endurance Agility Flexibility Power	20-35%	Objective tests Teacher observation
Knowledge and Appreciation of Skills Strategy Rules History and terms	5-25%	Written tests Teacher observation
Behavior in terms of Social conduct Health and safety practices	5-25%	Teacher observation Student evaluation

[9]Lynn W. McCraw, "Principles and Practices for Assigning Grades in Physical Education", Journal of Health, Physical Education, Recreation. 35:24-24, 1964

Van Dalen Study. Van Dalen presented a study which was published in the April, 1961 issue of the Journal of Health, Physical Education and Recreation concerning the evaluation of graduate instruction in physical education.[10] Van Dalen feels that it is imperative that we devote more attention to evaluating the effectiveness of advanced physical education instruction. He suggests the following points which may be useful to the person who wishes to appraise the quality of scholarly leadership he is offering in physical education:

1. The graduate instructor needs to ensure that his teaching efforts are directed toward sound educational objectives.
2. The graduate instructor has to ensure that he provides for the needs of students, the profession, and society when he develops and organizes his course content.
3. The graduate instructor has to ensure that he establishes a classroom climate that is conducive to learning.
4. The instructor needs to ensure that he keeps professionally and physically fit to offer the best educational leadership.
5. The graduate instructor needs to ensure that he provides adequately for the individual and professional growth of the student.

Under all these points Dr. Van Dalen offered numerous criteria

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[10] D. B. Van Dalen, "Evaluating Graduate Instruction in Physical Education," Journal of Health, Physical Education, Recreation. 32:34, 1965

or suggestions which might aid in accomplishing them.

Esteva Study. Esteva presented a study which was published in the Journal of Health, Physical Education and Recreation.[11] The article dealt with the evaluation of college physical education. Miss Esteva is of the opinion that college faculties have the responsibility of carrying on a continuous evaluative process, to keep in the forefront of their thinking an awareness of the degree to which they are accomplishing professional objectives. The degree to which objectives are realized, providing these are realistic and valid, is a good indication of the effectiveness of the program.

Miss Esteva's data was collected through participation in the evaluation of objectives developed and accepted by Brooklyn College of the City University of New York. Therefore, to evaluate the program in physical education the department reviewed and evaluated their objectives. This was done by using various established tests with an attempt to use the most objective and valid available. The faculty administered pre-tests and post-tests in activity classes. Some of the tests used were: the Dyer Test in tennis, the French and Cooper Wall Test and Service Test in volleyball, the Wilson Test for intermediate swimming, a simple shallow water distance test for beginning swimming, and first and last day scores in bowling. It was found that some classes could not be evaluated objectively.

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[11]Rose U. Esteva, "Evaluating College Physical Education," Journal of Health, Physical Education, Recreation. 36:36, 1965

The attitude of students toward physical education was also measured. This was done through use of the Wear Attitude Inventory.

> Miss Esteva summarized by saying, "One thing was certain. Merely going through the process of planning and evaluating the program proved of value. Being forced to inquire into the reasons behind our practices and beliefs in order to test them has shed new light on their value."[12]

The aforementioned studies represent work done in the elementary, junior high, senior high and college levels. The author feels that these studies were very informative and helpful as a guide toward eventual completion of this study.

VI. ORGANIZATION OF REMAINING CHAPTERS

The remaining chapters of this study were organized as follows:

Chapter II Data for School "A"

Chapter III Data for School "B"

Chapter IV Data for School "C"

Chapter V Data for School "D"

Chapter VI Data for School "E"

Chapter VII Data for School "F"

Chapter VIII Data for School "G"

Chapter IX Data for the Seven Schools

Chapter X Summary, Conclusions and Recommendations

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[12]Rose U. Esteva, "Evaluating College Physical Education," Journal of Health, Physical Education, Recreation. 37:37, 1965

CHAPTER II

DATA FOR SCHOOL "A"

School "A" had a total school enrollment of 98 students. Of these, 55 were boys. The total school area, including buildings and grounds, consisted of 20 acres.

The gymnasium was recently completed and has a floor area that meets the size standards of the score card. This gymnasium houses both boys and girls physical education classes. One full-time physical education instructor for boys is employed at the school.

I. INTERPRETATION OF DATA

Figure 1 shows the percentage scores for School "A" and includes the following elements of the score card used: (1) facilities, (2) program organization, and (3) program activities. The "possible points" column shows the maximum points obtainable while the "points scored" column represents the points actually scored for the school.

Graphic representation of the percentages for the divisions and subdivisions are depicted by black lines. Lines depicting the totals of all areas are in red. The average for the school is shown by a black vertical line.

A total average percentage score of 67 was received for the division "facilities". Some of the areas that caused this rating were outdoor facilities, equipment, and general supplies. Areas scoring high were area of school site, placement of buildings and indoor

FIGURE 1. DATA FOR SCHOOL "A"

Divisions of Score Card	Possible Points	Points Scored	Per Cent
Facilities			
Area of school site	120	120	100
Placement of buildings	31	31	100
Indoor facilities	156	133	85
Outdoor facilities	136	45	33
Equipment	64	35	55
Supplies (general)	121	51	43
Supplies (first aid)	31	25	80
Total	659	440	67
Program (organization)			
Time allotment	113	22	19
Health examination	70	34	49
Examination by instructor	35	11	31
Assignment to classes	50	25	50
Size of classes	50	50	100
Teacher load	62	62	100
Records kept and used	50	30	60
Credit	25	0	0
Total	455	234	51
Program (activities)			
Instructional period	283	92	33
Intramural athletics	142	0	0
Total	425	92	22
GRAND TOTAL	1,539	766	50

facilities. This school had a large amount of play space. They had no track. The football field was good. There were no outdoor basketball courts, handball courts, tennis courts, badminton courts, volleyball courts, archery lanes, croquet court, golf driving cages, golf putting greens, and horseshoe courts.

The indoor facilities rated high in all areas except corrective room, and swimming pool. In the subdivision, equipment, there was no corrective room equipment, no parallel bars, no buck, horse, climbing ropes, rings or uni-goals. Supplies (general) scored low because many activities were not offered that called for these supplies. Supplies (for prevention and emergency care of injuries) were rated 80 per cent.

The "program (organization)" division rated a total average of 51 per cent. Size of classes and teacher load scored 100 per cent. Areas that were low were: time allotment, health examination, examination by instructor, and credit.

The "program (activities)" reflected a considerable weakness in the instructional period and intramural athletics. A total of 22 per cent was given for the two items scored. Basketball, touch football, badminton, baseball, softball, soccer, volleyball, and track and field activities were the only activities being offered. The major reasons for this limited type of program was the lack of finances and outdoor facilities. The school had absolutely no intramural program.

II. SUMMARY ANALYSIS

School "A" received a grand total average of 50 per cent. The highest scoring division was "facilities" with an average of 67 per cent.

"Program (organization)" scored a total of 51 per cent. Two elements received the maximum 100 per cent; they were size of classes and teacher load. The area scoring lowest was credited with a score of zero per cent. Credit was not given for physical education, but all students were required to take four years of physical education instruction. The periods were 60 minutes long and were offered two days a week.

"Program (activities)" rated a grand total of 22 per cent. Instructional period scored 33 per cent and intramural athletics scored zero per cent.

CHAPTER III

DATA FOR SCHOOL "B"

School "B" had a total enrollment of 37, of which 25 were boys. The total school area, including buildings and grounds, consisted of six acres. One full-time physical education instructor for boys is employed at the school.

The gymnasium is located on the east side of the school building. It met the minimum standards set up in the score card.

I. INTERPRETATION OF DATA

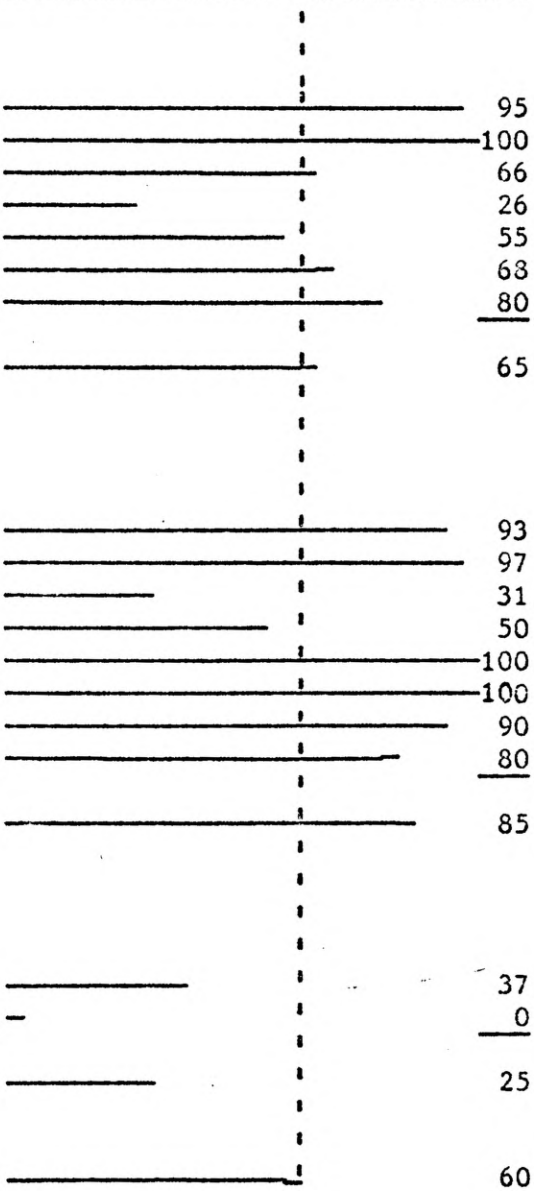
Figure 2 shows the division and subdivision scores for School "B". A total average score of 65 per cent was received for the division "facilities". Area of school site and placement of buildings scored highest. Outdoor facilities and equipment were low with 26 and 55 per cent respectively. Indoor facilities scored 66 per cent, supplies (general) scored 68 per cent, and supplies (first aid) scored 80 per cent.

"Program (organization)" rated a total average of 85 per cent. Size of classes and teacher load each scored 100 per cent. Examination by instructor and assignment to classes scored low. Assignment to classes was done largely by year in school. Records kept and used scored 90 per cent.

Health examinations by a physician are required of all boys participating in interscholastic athletics.

FIGURE 2. DATA FOR SCHOOL "B"

Divisions of Score Card	Possible Points	Points Scored	Per Cent
Facilities			
Area of school site	120	114	95
Placement of buildings	31	31	100
Indoor facilities	156	104	66
Outdoor facilities	136	35	26
Equipment	64	35	55
Supplies (general)	121	82	68
Supplies (first aid)	31	26	80
Total	659	427	65
Program (organization)			
Time allotment	113	105	93
Health examination	70	68	97
Examination by instructor	35	11	31
Assignment to classes	50	25	50
Size of classes	50	50	100
Teacher load	62	62	100
Records kept and used	50	45	90
Credit	25	20	80
Total	455	386	85
Program (activities)			
Instructional period	283	106	37
Intramural athletics	142	0	0
Total	425	106	25
GRAND TOTAL	1,539	919	60



The "program (activities)" division rated a total score of 25 per cent. Subjects taught were: American football (touch), badminton, basketball, croquet, some gymnastic drills, softball, soccer, tennis, tumbling, track and field activities, and volleyball. The school offered no intramural activity.

II. SUMMARY ANALYSIS

School "B" received a grand total score of 60 per cent. "Facilities" received a total average of 65 per cent. Placement of buildings received 100 per cent with area of school site scoring a close 95 per cent. Outdoor facilities scored 26 per cent.

"Program (organization)" was given a total average of 85 per cent. Size of classes and teacher load each received a score of 100 per cent. Examination by instructor scored a low 31 per cent.

"Program (activities)" received a total average of 25 per cent. Instructional period scored 37 per cent and intramural athletics received zero per cent.

CHAPTER IV

DATA FOR SCHOOL "C"

School "C" had a total enrollment of 128 students. Of these, 60 were boys. The total school area, including buildings and grounds, consisted of 10 acres. The facilities at this school are relatively new. There is one full-time physical education instructor at the school.

I. INTERPRETATION OF DATA

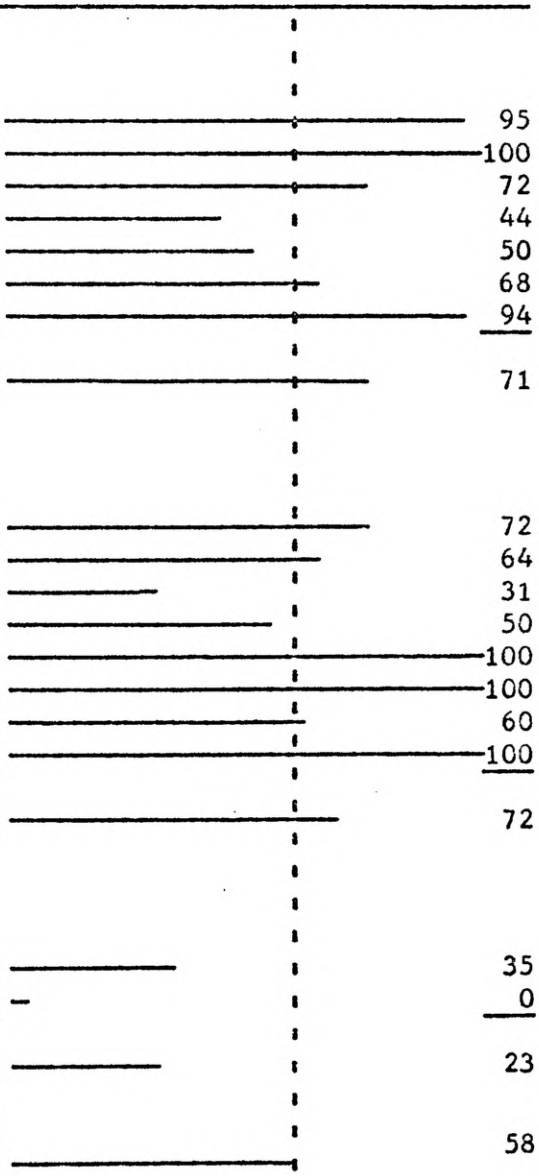
The data evaluated at this school are presented in Figure 3. The "facilities" division scored a grand total average of 71 per cent. Placement of buildings scored 100 per cent as there is only one school building. Area of school site and supplies (for prevention and emergency care of injuries) scored 95 and 94 per cent respectively. Equipment rated a low score of 50 per cent.

The division on "program (organization)" received a grand total score of 72 per cent. Three areas in this division received a score of 100 per cent. They were: size of classes (normal groups), teacher load, and credit. Time allotment for physical education received a score of 72 per cent. Low scorer for this division was physical examinations by the instructor which received a score of 31 per cent.

"Program (activities)" received a score of 23 per cent. Instructional period received a score of 35 per cent whereas intramural athletics was low score with zero per cent.

FIGURE 3. DATA FOR SCHOOL "C"

Divisions of Score Card	Possible Points	Points Scored	Per Cent
Facilities			
Area of school site	120	114	95
Placement of buildings	31	31	100
Indoor facilities	156	113	72
Outdoor facilities	136	60	44
Equipment	64	32	50
Supplies (general)	121	85	68
Supplies (first aid)	31	29	94
Total	659	464	71
Program (organization)			
Time allotment	113	81	72
Health examination	70	45	64
Examination by instructor	35	11	31
Assignment to classes	50	25	50
Size of classes	50	50	100
Teacher load	62	62	100
Records kept and used	50	30	60
Credit	25	25	100
Total	455	329	72
Program (activities)			
Instructional period	283	99	35
Intramural athletics	142	0	0
Total	425	99	23
GRAND TOTAL	1,539	892	58



II. SUMMARY ANALYSIS

School "C" received a grand total average score of 58 per cent. "Program (organization)" was high with 72 per cent.

Next highest area was that of "facilities" with a grand total percentage score of 71. Area of school site, placement of buildings on school site, and indoor facilities scored a combined average of 89 per cent. Outdoor facilities, equipment, supplies (general), and supplies (first aid) scored an average combined score of 64 per cent.

"Program (activities)" was the low division with a grand total score of 23 per cent. Instructional period scored 35 per cent. Intramural athletics received a percentage score of zero.

CHAPTER V

DATA FOR SCHOOL "D"

School "D" had a total school enrollment of 189. Total number of boys enrolled was 75. Total school area including buildings and grounds was 12 acres. A new library and classrooms have been added to this school in the past year.

The gymnasium is also fairly new and is part of the main building. The internal arrangement is very good. One full-time and two part-time instructors are employed at the school. The part-time physical education instructors have other teaching duties also.

I. INTERPRETATION OF DATA

Figure 4 shows the data for School "D". "Facilities" had a range of scores with area of school site and placement of buildings on school site scoring 100 per cent. Outdoor facilities received the lowest score of 35 per cent. Indoor facilities scored 85 per cent. Equipment, supplies (general and care of injuries) scored a combined average of 72 per cent. The grand total score for the division "facilities" was 74 per cent.

"Program (organization)" received a grand total score of 62 per cent. Two sections showed a percentage score of 100: size of classes (normal group) and teacher load. Areas scoring low were time allotment, examination by instructor, and assignment to classes. Time allotment scored very low in this school, receiving a percentage score

FIGURE 4. DATA FOR SCHOOL "D"

Divisions of Score Card	Possible Points	Points Scored	Per Cent
Facilities			
Area of school site	120	120	100
Placement of buildings	31	31	100
Indoor facilities	156	133	85
Outdoor facilities	136	48	35
Equipment	64	40	63
Supplies (general)	121	85	68
Supplies (first aid)	31	28	86
Total	659	485	74
Program (organization)			
Time allotment	113	17	15
Health examination	70	53	76
Examination by instructor	35	16	46
Assignment to classes	50	25	50
Size of classes	50	50	100
Teacher load	62	62	100
Records kept and used	50	40	80
Credit	25	20	80
Total	455	283	62
Program (activities)			
Instructional period	283	106	37
Intramural athletics	142	0	0
Total	425	106	25
GRAND TOTAL	1,539	874	57

of 15 per cent. Records kept and used and credit scored high.

The division "program (activities)" scored a grand total percentage of 25. Intramurals scored low with a total of zero per cent. Instructional period received a score of 37 per cent.

II. SUMMARY ANALYSIS

School "D" received a grand total score of 57 per cent. "Facilities" was high of all the sections with a grand total score of 74 per cent. Placement of buildings on school site and area of school site received scores of 100 per cent. Outdoor facilities was the only really low score in this section, receiving a score of 35 per cent. Equipment and supplies (general) scored in the 60 percentile. Indoor facilitites and supplies (first aid) received scores in the mid-eighties.

The next high section was "program (organization)" with a total score of 62 per cent. Two subdivisions scored 100 per cent: size of classes (normal) and teacher load. Time allotment scored a low 15 per cent. Records kept and used, credit and health examination received scores of 80, 80, and 76 per cent respectively.

"Program (activities)" showed a percentage score of 25. Intramurals received zero per cent and instructional period scored 37 per cent.

CHAPTER VI

DATA FOR SCHOOL "E"

School "E" had a total enrollment of 152 students. Of these, 85 were boys. The total school area, including buildings and grounds, consisted of 15 acres.

Physical education facilities are quite new at this school. The main part of the high school building is quite old but the gymnasium is reasonably new. There is one full-time physical education instructor and one part-time physical education instructor employed at this school.

I. INTERPRETATION OF DATA

Figure 5 shows the results of the data evaluated at this school. The "facilities" division scored a grand total average of 83 per cent. Area of school site and placement of buildings on school site rated a score of 100 per cent. This school scored reasonably high in all subdivisions of "facilities". Low scores were outdoor facilities and equipment. Each with scores of 67 per cent.

The division on "program (organization)" received a grand total score of 62 per cent. Two areas in this division scored 100 per cent. They were: size of classes (normal group) and teacher load. Health examination assignment to classes, records kept and used, and credit received scores of 91, 50, 70, and 80 respectively. Low score for this division was examination by instructor which received a score of 31.

FIGURE 5. DATA FOR SCHOOL "E"

Divisions of Score Card	Possible Points	Points Scored	Per Cent
Facilities			
Area of school site	120	120	100
Placement of buildings	31	31	100
Indoor facilities	156	137	88
Outdoor facilities	136	91	67
Equipment	64	43	67
Supplies (general)	121	96	79
Supplies (first aid)	31	29	94
Total	659	547	83
Program (organization)			
Time allotment	113	17	15
Health examination	70	64	91
Examination by instructor	35	11	31
Assignment to classes	50	25	50
Size of classes	50	50	100
Teacher load	62	62	100
Records kept and used	50	35	70
Credit	25	20	80
Total	455	284	62
Program (activities)			
Instructional period	283	132	48
Intramural athletics	142	10	.07
Total	425	142	33
GRAND TOTAL	1,539	973	63

"Program (activities)" received a score of 33 per cent. Instructional period received a high of 48 per cent in this division. Intramural athletics was low with .07 per cent. This was because the school offers intramural basketball.

II. SUMMARY ANALYSIS

School "E" received a grand total average score of 63 per cent. "Facilities" was high division with a grand total score of 83 per cent. Area of school site, placement of buildings on school site, and indoor facilities scored a combined average of 96 per cent. Outdoor facilities, equipment, supplies (general) and supplies (first aid) scored an average combined score of 77 per cent.

"Program (organization)" was the next high division with a grand total score of 62 per cent. Size of classes and teacher load each scored 100 per cent. Examination by instructor was low with 31 per cent. The other areas of this division scored a combined total average of 61 per cent.

"Program (activities)" rated last in the division scoring a total average of 33 per cent. Instructional period scored 48 per cent. Intramural athletics scored .07 per cent.

CHAPTER VII

DATA FOR SCHOOL "F"

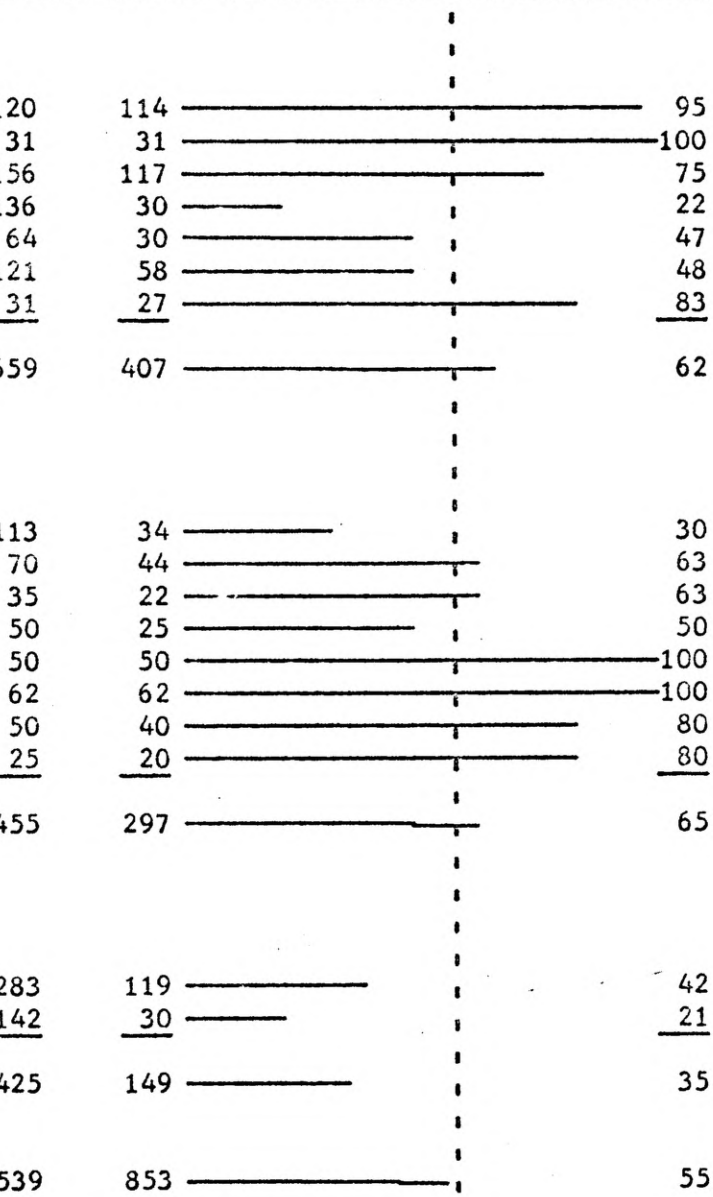
School "F" had a total high school enrollment of 145 students of which 82 were boys. The total school area, including buildings and grounds, consisted of 10 acres. The gymnasium is moderately new and is part of the main building. Both boys and girls physical education classes are held in this gymnasium. One full-time physical education instructor is employed by the school. He also serves as athletic coach for basketball and track.

I. INTERPRETATION OF DATA

Figure 6 shows the percentage scores for School "F". The "facilities" division rated a total average of 62 per cent. Areas scoring low in this division were outdoor facilities, equipment, and supplies (general). Areas scoring high were area of school site, placement of buildings, and supplies (first aid). This school has ample play space, but is just beginning to develop and provide outdoor physical education facilities. The score for the subdivision, outdoor facilities, that this school received was a very low 22 per cent. The primary reason for this low score was the lack of a track. There were no outdoor handball courts, volleyball courts, pole vault pits, high jump pits, long jump pits, bleachers, archery lanes, croquet court, golf driving cages, golf putting greems, tennis courts and badminton courts.

FIGURE 6. DATA FOR SCHOOL "F"

Divisions of Score Card	Possible Points	Points Scored	Per Cent
Facilities			
Area of school site	120	114	95
Placement of buildings	31	31	100
Indoor facilities	156	117	75
Outdoor facilities	136	30	22
Equipment	64	30	47
Supplies (general)	121	58	48
Supplies (first aid)	31	27	83
Total	659	407	62
Program (organization)			
Time allotment	113	34	30
Health examination	70	44	63
Examination by instructor	35	22	63
Assignment to classes	50	25	50
Size of classes	50	50	100
Teacher load	62	62	100
Records kept and used	50	40	80
Credit	25	20	80
Total	455	297	65
Program (activities)			
Instructional period	283	119	42
Intramural athletics	142	30	21
Total	425	149	35
GRAND TOTAL	1,539	853	55



Supplies (first aid) received a better than average score of 83 per cent. This is primarily due to the fact that these supplies are needed in case of athletic injuries.

The "program (organization)" division showed a grand total average of 65 per cent. Size of classes and teacher load again scored 100 per cent. This is probably due to the small enrollment of the school. Records kept and used and credit each scored 80 per cent. Health examination and examination by instructor each scored 63 per cent. Time allotment received a very low 30 per cent. This was due to the fact that physical education classes met only three times a week for 45 minutes.

The "program (activities)" again showed a weakness in both subdivisions. Instructional period received a rating of 42 per cent while intramural athletics received 21 per cent. This school still received the highest rating for intramurals than any of the others. This is due to the fact that they offer American football, basketball, ping pong, and volleyball in intramural athletics.

II. SUMMARY ANALYSIS

School "F" received a grand total average of 55 per cent. The highest scoring division was "program (organization)" with 65 per cent. Two elements received the maximum 100 per cent; they were size of classes and teacher load. The area scoring lowest was time allotment with a score of 30 per cent.

"Facilities" rated a grand total score of 62 per cent. Outdoor

facilities scored low with a score of 22 per cent. Placement of buildings scored the highest with a score of 100 per cent. Area of school site was a close second with a score of 95 per cent.

"Program (activities)" scored a grand total of 35 per cent. Instructional period scored 42 per cent. Intramural athletics rated 21 per cent.

CHAPTER VIII

DATA FOR SCHOOL "G"

School "G" had a total enrollment of 56, of which 31 were boys. The total school area, including buildings and grounds, consisted of four acres. One full-time physical education instructor for boys is employed and also serves as varsity athletic coach.

The gymnasium was old, but met minimum scoring requirements. It is part of the main high school building.

I. INTERPRETATION OF DATA

Figure 7 shows the division and subdivision scores for School "G". The "facilities" division rated a very low total average of 47 per cent. This was due to not having an adequate area of school site. The ground the school building is located on is all the area they own. There is no play space adjacent. The city park is used as a play ground and the football field is situated near here. Area of school site received a minimum score of zero per cent because of this. Placement of buildings received a maximum score of 100 per cent with supplies (first aid) running a close second of 97 per cent.

Indoor facilities received a rating of 75 per cent. Outdoor facilities received a low score of 24 per cent. The school was given credit for having a shot put ring, baseball diamond, softball diamond, football field, pole vault pit, long jump pit, high jump pit, and bleachers. These were located in the city park. Equipment and supplies

FIGURE 7. DATA FOR SCHOOL "G"

Divisions of Score Card	Possible Points	Points Scored	Per Cent
Facilities			
Area of school site	120	0	0
Placement of buildings	31	31	100
Indoor facilities	156	118	75
Outdoor facilities	136	33	24
Equipment	64	33	52
Supplies (general)	121	65	54
Supplies (first aid)	31	30	97
Total	659	310	47
Program (organization)			
Time allotment	113	81	72
Health examination	70	4	.06
Examination by instructor	35	11	31
Assignment to classes	50	25	50
Size of classes	50	50	100
Teacher load	62	62	100
Records kept and used	50	20	40
Credit	25	20	80
Total	455	273	60
Program (activities)			
Instructional period	283	145	51
Intramural athletics	142	0	0
Total	425	145	34
GRAND TOTAL	1,539	728	47

(general) also received low scores of 52 and 54 per cent respectively.

"Program (organization)" rated a total average of 60 per cent. Teacher load and size of classes garnered high scores of 100 per cent. Health examination received an almost nill score of .06 per cent. Records kept and used, assignment to classes, and examination by physician also scored low. Credit received a score of 80 per cent. This was because only one credit was needed or required for graduation. Health examination scored very low because the boys received only one very skimpy examination for athletics.

The "program (activities)" division rated a total score of 34 per cent. The instructional period scored 51 per cent. The subjects being taught were: badminton, American football (touch), basketball, diving, gymnastic drills, life saving and water safety, softball, pyramid building, soccer, speedball, track and field activities, tumbling, and volleyball. The reason diving and life saving were taught is because a nearby hotel had an indoor swimming pool that was made available to the school. Intramural athletics received a score of zero per cent.

II. SUMMARY ANALYSIS

School "G" received a grand total score of 47 per cent. Lack of play space and finances were primary causes of this low score.

"Facilities" received a total average of 47 per cent. Placement of buildings received a total score of 100 per cent. Area of school site received a score of zero per cent and outdoor facilities scored

24 per cent.

"Program (organization)" was given a total average of 60 per cent. Size of classes and teacher load each received a score of 100 per cent. Health examination and examination by instructor scored a very low .06 per cent and 31 per cent respectively.

"Program (activities)" received a low grand total average of 34 per cent. Instructional period received 51 per cent and intramural athletics scored zero per cent.

CHAPTER IX

DATA FOR THE SEVEN SCHOOLS

The data for the seven schools are presented in Figure 8, and includes the three divisions of the score card that were used. The maximum points attainable are shown under the "points possible" column. Column 2 shows the points actually scored by the four schools.

Percentage for divisions and subdivisions are denoted with horizontal lines, while the average for the four schools is shown by a vertical line. Totals for each division and the grand total are denoted by red horizontal lines.

Over all, indoor facilities, area of school site, placement of buildings, and supplies (first aid) were very adequate. Outdoor facilities scored very low with 36 per cent. Five of the seven schools had outdoor basketball courts and only two of these were paved. All of the schools were without the following facilities: outdoor handball courts, archery lanes, golf driving cages, and golf putting greens. Only one school had horseshoe courts. Two schools had tennis courts and only one of these was paved. Two schools had outdoor badminton courts. Only three schools had outdoor volleyball courts. One of these was paved. All schools had softball and baseball diamonds. All schools except one had a football field. All schools except two had a track.

Equipment had an average score of 55 per cent for the seven schools. Items of equipment not in evidence in any of the schools

FIGURE 8. DATA FOR ALL SCHOOLS

Divisions of Score Card	Possible Points	Points Scored	Per Cent
Facilities			
Area of school site	840	702	84
Placement of buildings	217	271	100
Indoor facilities	1,092	855	78
Outdoor facilities	952	342	36
Equipment	448	248	55
Supplies (general)	847	522	62
Supplies (first aid)	217	194	90
Total	4,613	3,080	67
Program (organization)			
Time allotment	791	357	45
Health examination	490	312	64
Examination by instructor	245	93	38
Assignment to classes	350	175	50
Size of classes	350	350	100
Teacher load	434	434	100
Records kept and used	350	240	69
Credit	175	145	83
Total	3,185	2,106	66
Program (activities)			
Instructional period	1,981	799	40
Intramural athletics	994	40	.04
Total	2,975	839	29
GRAND TOTAL	10,773	6,025	56

included: buck, horse and uni-goals. Corrective room equipment and parallel bars were totally absent in all but one school. All other items were fairly adequate.

Supplies (general) scored a 62 per cent average for the seven schools. Most complete supplies included: basketballs, footballs, volleyballs, softballs, bats, ball inflators, air slacked lime (in this state, Montana, they are required to use chalk), volleyball nets, pistols, scorebooks, shots, tape lines, stop watches, and whistles. Supplies almost non-existent in the schools were archery arm and finger guards, golf balls, hand balls, bean bags, golf clubs, dart sets, horseshoe sets, boxing gloves, mending kits, and tennis raquets. Other supplies were fairly adequate.

"Program (organization)" received a grand total average score of 66 per cent for the seven schools. Most schools were weak concerning time allotment. Physical education was usually offered three times a week for about 50 minutes. Time allotment received a total average of 45 per cent for the seven schools. Health examinations also scored quite low with an average of 64 per cent. All the schools had examinations that included check of age, height, weight, and vision. Areas not included were checks of spine deviation and feet.

Size of classes and teacher load rated a maximum total average score of 100 per cent for the seven schools. This was primarily due to the small enrollment in the schools. Credit and records kept and used were quite adequate for all schools except one which offered no credit.

"Program (activities)" contains two subdivisions: instructional period and intramural athletics. All seven schools offered the following activities: American football (touch), basketball, track and field events, softball, soccer, and volleyball. All except one school offered badminton. Activities not offered at any of the schools were: golf, fencing, dancing (folk), dancing (gymnastic), dancing (square), boxing, bowling, boating activities, squash, skiing, skating, ice hockey, and hiking and mountain climbing. "Program (activities)" rated a grand total average score of a very low 29 per cent for the seven schools.

Intramural athletics were almost nill in the seven schools. The average score for the seven schools in intramural athletics was .04 per cent. Two schools had intramural basketball. One school had intramural American football (touch), ping-pong, and volleyball. Five schools had no intramurals at all.

CHAPTER X

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

It has been the purpose in the preceding chapters to present the data in the most objective manner possible. The authors of the score card realized that some areas could not be scored as objectively as others. In the preface of the Neilson and Hudson score card this excerpt was noted:

> The authors admit this score card has some imperfections. Some of the standards may be too high, while others may be too low. The field of physical education is so new in its modern development that even experts find real difficulty in coming to a general agreement on the major elements involved.[13]

The author feels that enough evidence has been presented to show those concerned with this evaluation exactly where the needs are. One purpose in this study has been to find the areas of weakness so that improvement may be forthcoming. In describing the value of the score card Neilson and Hudson explained:

> The value of the score card lies not so much in the total score, as in the analysis of the detailed score in each unit. It is therefore hoped that this score card will be found useful in stimulating self improvement of schools, rather than in comparing one school's standing with that of another. Its use should also result in sugges-

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[13] N. P. Neilson and Don R. Hudson, A Score Card for the Evaluation of Physical Education Programs for High School Boys. California State College, Hayward, California, 1967

tions to the authors for improvement in the score card itself.[14]

I. STATEMENT OF THE PROBLEM

The general problem in this study was to evaluate the boys' physical education programs in the seven class "C" high schools of Gallatin County, Montana. Some of the specific problems were:

(1) To determine the nature and extent of the facilities in each school.

(2) To determine the different aspects of program organization, including such problems as time allotment, size of classes, teacher load, records kept and used, and credit.

(3) To determine the activities taught and the extent of participation in physical education classes and intramural athletics.

II. METHOD OF STUDY

After selecting the problem it became necessary to determine what techniques or tools should be used to gather the data needed. It was decided that the best instrument available for this study was the Neilson-Hudson score card.

Permission was gained from the superintendents of the seven class "C" high schools in Gallatin County to make the study.

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[14] N. P. Neilson and Don R. Hudson, A Score Card for the Evaluation of Physical Education Programs for High School Boys. California State College, Hayward, California, 1967

In general, the study may be classified as normative survey, descriptive, and evaluative. The evaluation was confined to the items included in the survey instrument.

III. SUMMARY OF FINDINGS

Figure 9 shows how the seven schools scored under the three divisions of the score card that were used.

The "possible points" for "facilities" totaled 659. School "E" was high with 83 per cent; School "D" 74 per cent; School "C" 71 per cent; School "A" 67 per cent; School "B" 65 per cent; School "F" 62 per cent; and School "G" 47 per cent. Outdoor facilities and equipment were low for the group. Placement of buildings, area of school site, and supplies (first aid) scored high.

Under "program (organization)" the scores for the seven schools ranged from 51 per cent to 85 per cent. School "B" scored 85 per cent; School "C" scored 72 per cent; School "F" scored 65 per cent; Schools "D" and "E" scored 62 per cent; School "G" scored 60 per cent; and School "A" scored 51 per cent. There were two areas under "program (organization)" that scored 100 per cent. They were: size of classes and teacher load. Examination by instructor and assignment to classes received low scores.

"Program (activities)" scored lowest of all divisions of the score card. Scores ranged from 22 to 35 per cent. School "F" scored 35 per cent; School "G" scored 34 per cent; School "E" scored 33 per cent; Schools "D" and "B" scored 25 per cent; School "C" scored 23

FIGURE 9. SUMMARY OF SCORES FOR SEVEN SCHOOLS

Divisions of Score Card	Possible Points	Points Scored	Per Cent
Facilities			67
School "A"	659	440	67
School "B"	659	427	65
School "C"	659	464	71
School "D"	659	485	74
School "E"	659	547	83
School "F"	659	407	62
School "G"	659	310	47
Program (Organization)			66
School "A"	455	234	51
School "B"	455	386	85
School "C"	455	329	72
School "D"	455	283	62
School "E"	455	284	62
School "F"	455	297	65
School "G"	455	273	60
Program (Activities)			29
School "A"	425	92	22
School "B"	425	106	25
School "C"	425	99	23
School "D"	425	106	25
School "E"	425	142	33
School "F"	425	149	35
School "G"	425	145	34

per cent; and School "A" scored 22 per cent.

Intramural athletics had a range of .07 per cent to 21 per cent. Instructional period averaged a total score of 40 per cent.

IV. CONCLUSIONS

After careful analysis of the data, the following conclusions were drawn:

1. The Neilson-Hudson score card was a useful instrument for evaluating the physical education program in the high schools.
2. Physical education teachers, principals, and administrators will find the score card useful as a means of self-evaluation of their programs.
3. Outdoor facilities scored low in most of the schools due to the small enrollment and lack of finances of the school.
4. Equipment scored low in many areas.
5. Health examinations by a physician are infrequent and not complete.
6. The physical examination by the physical education teacher is good on certain items (age, height, and weight). Examination in other items would be considered inadequate.
7. Corrective classes for boys in physical education is non-existent in the seven schools.
8. Corrective equipment is almost non-existent in the seven

schools.

9. The teaching load for the physical education instructors was found to be good. All physical education instructors coach varsity athletics after their regular teaching schedule.
10. The instructional period in all the school was found to be very limited in scope. Only a few basic activities were being offered.
11. The intramural program in the high schools was almost non-existent.
12. There is no dancing program for boys being offered in any of the high schools.
13. There is too much emphasis on team sports and not enough emphasis on individual and dual sports.

V. RECOMMENDATIONS

As a result of this study the following recommendations are offered:

1. At least one copy of the Neilson-Hudson score card should be placed in each high school.
2. Close consideration should be given to the score card when any new facilities are being contemplated.
3. Outdoor facilities should include the following: at least one basketball court (paved), one handball court, one tennis court, one badminton court, one volleyball court,

one regulation baseball diamond, one shot put ring, one football field, one soccer field, one speedball field, one track with 220 yard straight-away, polevault pits, broad jump pits, high jump pits, bleachers, archery lanes, and horseshoe courts.

4. Each school should have a corrective room furnished with corrective equipment.
5. Supplies listed in the score card, that are not on the supply lists, should be added to these lists.
6. A new health examination form should be constructed which would include all areas of the score card under health examination by physician, dentist and nurse.
7. The school should require that each student enrolled in physical education receive a thorough and complete physical examination at least once each year.
8. A broader program of activities should be given. Such activities as handball, horseshoes, tennis, archery, and dancing, should be added to all physical education programs.
9. Many more intramural activities should be offered. Each school should hire one instructor who deals with intramurals only. He should be given the same compensation for this extra duty or time as the coaches.
10. Physical education should be taught five days a week for periods of not less than 50 minutes in every grade.

11. More emphasis should be placed on individual and dual sports activities.
12. It is recommended that the principal and physical education teacher at each school discuss the results of this study and make any changes in their program deemed necessary.
13. It is recommended that a similar study be conducted again in three to five years.
14. It is recommended that further study be conducted to find out why intramural sports and individual sports are neglected.

APPENDIX

A SCORE CARD FOR THE EVALUATION OF PHYSICAL EDUCATION PROGRAMS FOR HIGH SCHOOL BOYS

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PREFACE

Probably the best way to evaluate a physical education program in a school is to measure the progress made by pupils. To do this at the present time seems almost impossible. The hereditary and environmental conditions affecting pupils are so numerous and variable that one can never be certain as to how much of a pupil's progress in physical education is due to the school program and how much is due to other outside factors.

If an attempt were made to measure pupil progress, it would first be necessary to classify pupils into groups so as to minimize the influence of handicapping and advantage factors such as age, height and weight, and then find the amount of improvement shown by pupils through the application of valid tests designed to test for knowledge, interests, attitudes, strength, skills, and organic vitality. In the absence of adequate tools to measure pupil progress, the next best procedure seems to be that of measuring the elements in the school's physical education plan and then to assume a close correlation between the plan and the progress of students.

Supervisors and other persons are often asked to criticize and evaluate physical education programs. Without objective means, they give their best subjective judgments in terms of personal experiences and attitudes. We may assume administrators, supervisors and teachers have the desire to improve programs. There can be little doubt, therefore, as to the value of measuring objectively a school's physical education program. An accurate evaluation is useful when making school surveys and also when concentrating the attention of instructors, principals, supervisors, superintendents, boards of education and communities upon the particular points of strength and weakness.

An attempt is made here to measure more objectively and somewhat in detail those elements which, according to our present educational objectives, go to make up a worthwhile program in physical education. Because of the tremendous number of problems involved, it was decided that separate score cards should be constructed covering health service, health supervision and health instruction; that others be formulated for physical education on the different school levels. In the elementary school, one score card might suffice, while separate forms for girls and boys seem necessary on the secondary levels. The size of schools, which is an additional complicating factor, is taken care of within each score card.

The development of the score card in physical education for senior high school boys was begun in February, 1929, at the first regional conference on health and physical education held at Colusa, California. Under the direction of N. P. Neilson, then State Supervisor of Physical Education, twelve of these regional conferences were held and at each one a discussion of the score card

problem brought forth many valuable ideas which were immediately incorporated. As each possible unit was considered for inclusion in the score card, it was checked against the following criteria:

1. Does the unit have validity?

2. Does the unit justify its inclusion in terms of objectives?

3. Does the unit justify its inclusion in terms of the concepts of physical education which are generally accepted?

4. Does the unit allow the school an opportunity to improve its score?

5. Does the unit encourage the school to improve its score?

When it was thought that all of the units were developed, the score card in preliminary form was mimecgraphed and sent to fifty men holding key positions in physical education in California. These experts were asked to render judgments on the score card by first alloting 2,000 points to the five major headings and then distributing these allotments to the various sub-headings. Twenty-four summary sheets were returned involving the judgments of one hundred and twelve persons. Tabulations were made for each unit, thus obtaining the range and median of the judgments. These medians were used as a constant guide while making the final allotment of points to each unit in the score card.

The original score card for high school boys was published in 1931, by the California State Department of Education as Bulletin No. E-2. In 1949, this score card was revised by Dr. N. P. Neilson and Vaughn L. Hall and was published by the Department of Public Instruction, State of Utah. This present revision includes changes made necessary by experience gained in the use of the card over a long period of time.

The authors admit the card has some imperfections. Some of the standards may be too high, while others may be too low. The field of physical education is so new in its modern development that even experts find real difficulty in coming to a general agreement on the major elements involved. An attempt has been made to make the units objective wherever possible, but certain units such as the personality and character of instructor and the teaching efficiency of instructor could not be made objective and yet could not be eliminated because of their great importance.

The score card is not intended for use by inspectors. It should be used voluntarily by schools as a check list to locate particular points where improvement in their programs can be made. The value of the score card lies not

so much in the total score, as in the analysis of the detailed score in each unit. With the approval of the school principal, outside scorers might be used in making the survey. Upon completion of the score card summary sheet, the principal and physical education instructors should convene with the scorer to discuss the results and plans for improvement. It is, therefore, hoped that this score card will be found useful in stimulating self-improvement of schools, rather than in comparing one school's standing with that of another. Its use should also result in suggestions to the authors for improvement in the score card itself.

N. P. Neilson
D. R. Hudson

A SCORE CARD FOR EVALUATING PHYSICAL EDUCATION PROGRAMS FOR HIGH SCHOOL BOYS

General Instructions for Scoring

The same general plan of arrangement of each unit has been retained throughout the score card. There first appears a brief statement of standards, then explanations of technique of scoring, followed by the scoring device. Each unit may be more important than the score allotted to it indicates, because some units are interdependent. For example, no pupils enrolled in physical education would negate other units and outdoor courts and fields are possible only on a school site with sufficient area.

A reasonable time before the scoring takes place, the principal and physical education instructors of the school should be informed and asked to assemble the necessary data. In preparation for scoring the following information should be ready in convenient form at the school: Transcripts of all college work done to date by each instructor teaching physical education; certificates of completion of courses not bearing college credit; receipts for dues or membership cards for each instructor showing present affiliation with professional organizations; dates held and nature of professional meetings attended by each instructor during the last year; for each instructor, places and years of teaching experience in physical education; record for each instructor of a recent examination by a physician; total area of school site in acres; total school enrollment; total boy enrollment; total girl enrollment; dimensions of all rooms used in connection with the physical education program; number of bleacher seats; list of corrective room equipment; dimensions of outdoor play fields and courts; a list of gymnasium and outdoor equipment; a list of all general and first-aid supplies including the quantity on hand for the year; number of boys and girls taking physical education; the number enrolled in each physical education class; total number of minutes weekly each physical education instructor is assigned to duty; sample record cards used; written material on the school award system; yearly program of activities taught by each physical education instructor; records of the intramural and interschool athletic programs; a list of professional magazines available at the school; and an alphabetical list of all physical education books in the school or physical education departmental library.

Better results will be secured if the following suggestions are observed:

1. The scorer, the principal of the school, and the physical education instructors concerned should be thoroughly familiar with the score card.

2. The scoring should be done by a person approved by the principal and one who is familiar with the physical education program in general.

3. Before beginning, the scorer should study the entire score card carefully so as to understand every detail.

4. Scorer should be familiar with what constitutes adequate heat, light, ventilation, and sanitation of the indoor plant.

5. The person doing the scoring should do all the writing on the score card.

6. Scoring should be done in the presence of either the physical education instructor, the principal of the school, or both.

7. Score each unit independentaly of all others.

8. Scorer should score the conditions as they exist at the time and not include improvements contemplated for the future.

9. Under indoor and outdoor facilities, score less if the facilities which are used are far removed from the school site.

10. Keep in mind that in certain units the score has been doubled to avoid using fractions or decimals, and the total must, therefore, be divided by two.

11. In units where evaluation is almost or entirely subjective, secure the combined judgments of three adult persons competent to judge those units.

12. The final score given to each unit in the score card should be to the nearest whole number of points.

13. The scoring should be completed during one day.

B - FACILITIES

I - AREA OF SCHOOL SITE

The physical education program in the high school stresses the playing of many different team games which necessitate large, level, outdoor play areas. Where sufficient land is not available, the natural type of program becomes impossible. This unit is so arranged as to require an increased acreage with an increased enrollment of the school.

TO SCORE - Determine the total number of acres in the school site, then deduct the approximate acreage which is entirely unsuitable for buildings, playgrounds or other purposes of any kind. This is the acreage usable. Next locate the total school enrollment -- (boys and girls). The points in the column under the school acreage (usable) and opposite the total school enrollment, are the number of points to be given. Circle these points and record in square "Score Given".

Total School Enrollment	Number of Acres (Usable)						
	Less than 4	4-5	6-9	10-14	15-19	20-29	30 and over
0-100	0	38	88	114	120	120	120
101-300	0	31	75	114	120	120	120
301-600	0	25	63	101	114	120	120
601-1000	0	19	51	88	114	120	120
1001-1800	0	13	38	75	114	120	120
1801-over	0	0	25	63	88	114	120

Score Possible	Score Given
120	

II - PLACEMENT OF BUILDINGS ON SCHOOL SITE

Not only should the school site include enough acreage to meet the standards set, but it is also important that school buildings be placed on the site so as to leave unbroken play space for physical education purposes. Where buildings are badly placed, areas too small for regulation fields and courts often result. In some cases, because of poor building placement, courts and fields are located with the long axis other than north and south.

TO SCORE - Record the points found opposite the statement which describes most nearly the condition which exists.

(Continued on following page)

Placement of Buildings	Points	Points Made
Play Space Badly Broken by Buildings	0	
Play Space Partly Broken by Buildings	13	
Play Space Unbroken by Buildings	31	

Score Possible	Score Given
31	

III - INDOOR FACILITIES

If students are to be suitably dressed, have shower baths, and take part in a well-balanced program of activities, certain indoor facilities are essential. Health service rooms, rest rooms, office space for instructors, storage space, dressing rooms, locker space, showers, toilet facilities and exercise floors are necessary.

Standards for Each Facility

1. GYMNASIUM FLOOR - Minimum sizes should be as follows:

Boys Enrolled	Width	Length	Height to Square*
0 - 500	65'	90'	22'
501 - over	76'	96'	22'

Maple or other hardwood floor; lines painted; walls smooth; interior painted light color, but not glaring; windows easily opened; radiators recessed if lower than seven-foot level; adequate light, heat, ventilation and sanitation; away from academic building; acoustics good; accessible to students and public; maximum of six basketball goals (2 cross courts and one end court); smooth area at least 12 feet high along one end or side wall for handball or tennis strokes.

2. BLEACHERS - Seating arrangements in gymnasium for student body enrollment (as a minimum); line of sight correct; safe; clean; without splinters (seats located on the gymnasium floor should be of the rollaway type).

3. APPARATUS OR ACTIVITY ROOM - A smaller exercise floor where mats, apparatus, etc., are kept; to be used for a second activity room; minimum sizes:

Boys Enrolled	Width	Length	Height to Square
301-500	30'	40'	16'
501-900	35'	50'	16'
901-over	40'	60'	16'

Maple or other hardwood floor; lines painted, walls smooth; interior painted light color, but not glaring, windows easily opened; adequate light, heat, ventilation and sanitation; accessible; separate facilities for storing temporary bleachers; piano and apparatus assumed to be convenient to this room and the main gymnasium floor. May be used also as a corrective room.

4. KITCHEN OR KITCHENETTE - The social, recreational use of the gymnasium requires the inclusion of a kitchen or kitchenette; outside delivery entrance; stove; sink; hot and cold water; cupboards; dishes; silverware; service counter to activity room. Give credit if located elsewhere in the school.

5. CLASS ROOM - To be used for health education classes, talks by instructors to athletic teams, general announcements, registration or home-room classes; minimum size, 20' x 30'; equipped with seating facilities; blackboard space, desk, book shelves, closet, moving picture screen, and charts; adequate light, heat, ventilation and sanitation; in large schools, part of physical education plant; in small schools, convenient to physical education department.

6. CORRECTIVE ROOM - Size approximately 20' x 30'; minimum height 12' (equipment is scored under equipment); adequate light, heat, ventilation and sanitation; arrangement good; accessible. (May be used also as an apparatus room in small schools.)

7. REST ROOM - Rest room for boys; to be used by limited number of boys when ill, injured, convalescent or when rest is prescribed; minimum floor area 160 square feet and to increase with enrollment; adequate light, heat, ventilation, sanitation; supplied with beds - one for each 50 boys taking physical education during the maximum period load; convenient to instructors' offices and examination room; closet for storage.

8. HEALTH UNIT ROOMS - This unit should include one or more rooms to be used for firstaid, health examinations, personal health conferences, and by physician, dentist and nurse. One room may serve all these purposes up to an enrollment of 500 boys; where enrollment exceeds 500 boys, other rooms should be added to include an office for physician and nurse and a waiting room; minimum floor area, 200 square feet; maximum floor area, 500 square feet; minimum length of examination room, 22 feet; adequate light, heat, ventilation and sanitation; equipped with single hospital bed; hot and cold water; first-aid supplies; chairs, desk; sink; soap; sitz tub; eye chart; full-length mirrors; one or more folding screens; files; table; toilet facilities adjoining; closet; cabinets.

9. INSTRUCTORS' OFFICES - In a school having one or two physical education instructors for boys, a single office 10' x 12' will suffice; with several instructors, two small offices, one to be used as a consulation room; and a large office sufficient to contain instructors' desks should be provided, adequate light; heat, ventilation, and sanitation; conveniently located for supervision of fields, locker room and exercise floor; showers, dressing room and toilet facilities for instructors; book case for department library; instructors' desks; cupboard; drawers; files; chairs; lockers; mirror.

10. SUPPLY ROOM - Minimum floor area, 60 square feet; size to increase with enrollment; used to store supplies which are in constant use; adequate light, heat, ventilation and sanitation; equipped with shelves; delivery counter; convenient to offices and dressing rooms; storage space for clean and soiled towels. In larger schools, a separate room for towels and swimming suits is desirable.

11. STORE ROOM - To be used for storing supplies not in daily use; should be adjacent to supply room; minimum floor area, 100 square feet and size to increase with enrollment; adequate light, heat, ventilation and sanitation; equipped with shelves, storage bins and clothes hangers.

12. DRESSING ROOM - Area to be used for dressing purposes; large enough to provide free space (exclusive of lockers) equal to 12 square feet per pupil for the largest number dressing in any one class period; adequate light, heat, ventilation and sanitation; provided with strong non-movable benches; adequate drainage so floor can be hosed out; room painted light color, but not glaring; toilets adjacent; drinking facilities; washing facilities; mirrors: location permitted under bleacher areas providing sufficient headroom, one outside wall, and floor not more than four feet below ground level. Dressing room not to be placed under other floor areas unless for unilateral lighting, the width of the room is not over twice the distance from the window tops to the floor; dressing room built in one story and with skylights in ceiling preferred.

13. EXTRA DRESSING ROOMS - Where interschool athletic competition is held, an extra dressing room for visiting teams is desirable. It should have a minimum floor area of 400 square feet; adequate light, heat, ventilation, sanitation; toilet and shower facilities convenient; provided with lockers and hooks where clothes can be hung. In larger schools, additional dressing rooms, with showers, are necessary for faculty, athletic teams, and community groups.

14. LOCKERS - Individual steel lockers, 12"x12"x36"; 9"x18"x36"; 7"x18"x36", preferred; lockers in double tier; set on four-inch concrete or tile covered base, arranged properly as to light and conservation of space; individual combination padlocks or combination locks preferred; large individual lockers for use by athletic team members during a season. Where other types of systems, such as basket system, cubicle system, eight or six to one, etc., are used, scoring is to be done on the basis of adequacy, sanitation, safety and convenience.

15. DRYING ROOM (SUITS) - Necessary in larger schools and especially where no other provisions have been made. Used for drying swimming suits and athletic uniforms; minimum floor area, 120 square feet and to increase with enrollment; adequate ventilation and sanitation; equipped with heat and facilities for hanging suits.

16. SHOWER ROOMS - Size of room to vary with enrollment of boys in physical education; 14 square feet of floor area for each shower head. The number of shower heads recommended is one for each four boys taking physical education during period having largest enrollment; the minimum should be one for each six boys; no school should have less than four shower heads; tiled floor area and walls tiled 4'9" high, preferred; adequate light, heat, ventilation, sanitation and drainage; drainage to side of room; no floor covering; no steps; hot and cold water; liquid soap from central container, from nickle plated wall stubs; shower heads and controls exposed; piping behind walls; fixed shower heads placed at three levels at chin height to prevent wetting hair; overhead type not desirable; central maximum heat control; individual hot and cold mixing valves at each shower; drying room between shower and dressing room preferred; size of drying room in proportion to enrollment; tower service convenient to drying room.

17. SWIMMING POOL - Pool may be covered or open-air, depending upon climatic conditions; size 35' x 75'; depth, 3'6" shallow end, and 12 feet in deep end; should not be under a building unless light ratio is properly maintained and in no case should the net height be less than 18' 0"; pool, runways, and 5' 0" wainscot preferred in tile; adequate light, heat, ventilation, sanitation and drainage; ladders recessed; runways surrounding pool, minimum width 5 feet on sides and 12 feet on each end; runway not to exceed 12" above water level in pool; provision for preventing spectators in street shoes from walking or standing on the runways; swimmers entrance to the pool through shower room; adequate machinery for heating, filtration and sterilization; standard spring board; depths of pool and floor lanes marked; safety provisions; no exposed pipings; all radiators brass and recessed; all exposed metal noncorrosive; bleachers for one-fifth of student enrollment (as a minimum); bleachers, temporary or permanent (temporary preferred); bleachers must be safe, clean and without splinters.

18. SANITARY FIXTURES - An adequate number should be provided; toilets and urinals should be convenient to dressing room and play areas; cement, tiled or terrazzo floors; urinals of vitrified china type. Toilet stalls 4'9" high; wash basins; soap containers; paper towels or drying machines; mirrors; drinking fountains; janitor's closet. All fixtures should be in sanitary condition.

19. INTERNAL ARRANGEMENT - Score convenience of arrangement of different units in the gymnasium building. Units should be arranged in logical order according to the service they are designed to render.

TO SCORE - For each type of facility, three factors must be considered: (1) the number of boys enrolled in physical education; (2) the number of units required; (3) the quality and condition of each facility. The points to be given each facility after considering these factors are indicated in the form. The score for each type of facility should be estimated according to how well it meets the standards given, the rating being (a) good, (b) average, (c) poor. Absence of the facility (where required) would score zero. Wherever the facility is not required, i.e., a school with 50 boys would not need a corrective room or a second exercise floor, an asterisk (*) has been placed and part or all of the number of points for this facility allowed under "score possible" should be given, provided some other facility can be used to accommodate the activity. In no case can the "Total Points Made" be greater than the "Score Possible". Under "number of rooms", circle the number of rooms being scored.

In small schools, because of cost, it may be necessary for boys and girls to use certain facilities in common. Where this is done, the same facility may be judged for both up to a total school enrollment as follows: Exercise floor, 300; apparatus or activity room, 1000'; kitchen or kitchenette (total enrollment); classroom, 600; corrective room, 600; health unit rooms, total enrollment; swimming pool, 1800.

(Chart given on following page)

Name of Facility	No. of Rooms	Boys Enrolled in Physical Education																		Score Possible	Total Points Made
		0 - 50			51 - 150			151 - 300			301 - 500			501 - 900			901 - over				
		a	b	c	a	b	c	a	b	c	a	b	c	a	b	c	a	b	c		
1. Gymnasium Floor	1	12	8	3	12	8	3	12	8	3	12	8	3	12	8	3	6	4	1	12	
	2	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	12	8	3		
2. Bleachers		6	4	1	6	4	1	6	4	1	6	4	1	6	4	1	6	4	1	6	
3. Apparatus or Activity Room	1	*	*	*	*	*	*	*	*	*	8	5	1	8	5	1	8	5	1	8	
4. Kitchen or Kitchenette	1	4	3	1	4	3	1	4	3	1	4	3	1	4	3	1	4	3	1	4	
5. Class Room	1	*	*	*	*	*	*	6	4	1	6	4	1	6	4	1	6	4	1	6	
6. Corrective Room	1	*	*	*	*	*	*	6	4	1	6	4	1	6	4	1	6	4	1	6	
7. Rest Room	1	*	*	*	5	3	1	5	3	1	5	3	1	5	3	1	5	3	1	5	
8. Health Unit Rooms	1	10	6	2	10	6	2	10	6	2	10	6	2	5	4	1	6	3	0		
	2	*	*	*	*	*	*	*	*	*	*	*	*	10	6	2	8	5	1	10	
	3	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	10	6	2		
9. Instructors' Offices	1	10	6	2	10	6	2	10	6	2	10	6	2	5	4	1	6	3	0		
	2	*	*	*	*	*	*	*	*	*	*	*	*	10	6	2	8	5	1	10	
	3	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	10	6	2		
10. Supply Room	1	4	3	1	4	3	1	4	3	1	4	3	1	4	3	1	4	3	1	4	

(Continued on next page)

Name of Facility	No. of Rooms	Boys Enrolled in Physical Education																		Score Possible	Total Points Made
		0 - 50			51 - 150			151 - 300			301 - 500			501 - 900			900 - over				
		a	b	c	a	b	c	a	b	c	a	b	c	a	b	c	a	b	c		
11. Store Room	1	*	*	*	4	3	1	4	3	1	4	3	1	4	3	1	4	3	1	4	
12. Dressing Room	1	12	8	3	12	8	3	12	8	3	12	8	3	12	8	3	12	8	3	12	
13. Extra Dressing Rooms	1	*	*	*	5	4	2	5	4	2	4	3	1	4	3	1	3	1	0	5	
	2	*	*	*	*	*	*	*	*	*	5	4	2	5	4	2	4	3	1		
	3	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	5	4	2		
14. Lockers	1	12	8	3	12	8	3	12	8	3	12	8	3	12	8	3	12	8	3	12	
15. Drying Room (Suits)	1	*	*	*	*	*	*	4	3	1	4	3	1	4	3	1	4	3	1	4	
16. Shower Room	1	12	8	3	12	8	3	12	8	3	12	8	3	12	8	3	12	8	3	12	
17. Swimming Pool	1	*	*	*	19	12	5	19	12	5	19	12	5	19	12	5	19	12	5	19	
18. Sanitary Fixtures		8	5	1	8	5	1	8	5	1	8	5	1	8	5	1	8	5	1	8	
19. Internal Arrangement		9	6	2	9	6	2	9	6	2	9	6	2	9	6	2	9	6	2	9	
																	TOTALS			156	

Score Possible	Score Given
156	

IV - OUTDOOR F[illegible]ILITIES

Certain types of valuable activities in the physical education program must be carried on out of doors. Fields and courts having various sizes and surfaces according to the nature of the activity are imperative.

STANDARDS FOR EACH ACTIVITY

1. BASKETBALL COURTS - Size 45' x 80' plus 5 feet on side and end space; surfaced; backstops and goals; courts running north and south; for good drainage slope 2" for 50'.
2. HANDBALL COURTS - Size 20' x 36' plus additional side and end space for one wall single courts; height of wall 18'; three or four wall courts much preferred; walls of concrete or tongue and groove wood, painted; hard surfaced floor; courts running north and south; lines painted; for rapid drainage slope 2" for 50'.

3. TENNIS COURTS - Size 36' x 78' net; total width 50'; total length 120'; surfaced area 50' x 120'; slope for rapid drainage 2" for 50'; lines marked; good net and net posts (removable); court running north and south; courts surrounded by No. 9 chain link (2-inch mesh) fence, 12 feet high; metal posts of fence set in concrete; at least one gate.

4. BADMINTON COURTS - Size 44' x 20'. There should be a minimum of 4 feet clearance from obstruction on each side; essential that there be a clearance of not less than 20 feet above the court; also official layout with lines well marked; good net; removable wooden or metal posts.

5. SHOT PUT RING - Metal band circle with radius of 3'6" sunk flush with the ground. Scratch board (4' long, 4-1/2" wide and 4" high) on the portion of the circle facing the throwing area; scratch board to be flush with inner edge of circle. Throwing area of adequate size and located with regard to safety of people in the area.

6. VOLLEYBALL COURTS - Size 30' x 60' net, with 4' 0" borders; entire area surfaced; for rapid drainage slope 2" for 50'; metal or wooden posts (4"x4") eight feet above ground; good net; lines marked; courts running north and south.

7. BASEBALL DIAMOND - Size 90' x 90'; field limit 235'; may be superimposed on some other field in schools having less than 301 boys enrolled in physical education; good turf in field area; dirt in good shape within diamond area; home plate in northeast corner; adequate backstop; good bases; lines market; field approximately level.

8. SOFTBALL DIAMONDS - Size 60' x 60'; field limit 135', may be superimposed on some other field or in free play area; surface dirt in good shape or turf; home plate in northeast corner; adequate backstop; good bases; lines marked; field approximately level.

9. FOOTBALL FIELD - Size 160' x 360'; 10 yards additional space on each side and end; standard goal posts; good turf; lines marked; field running north and south; adequate watering and drainage system; approximately level; may be superimposed on speedball field in schools having less than 151 boys enrolled in physical education.

10. SOCCER FIELD - Size 160' x 240'; 15' additional space on each side and end; standard goal posts; good turf; lines marked; field running north and south; adequate watering and drainage system; approximately level. May be superimposed on speedball field in schools having less than 901 boys enrolled in physical education.

11. SPEEDBALL FIELD - Size 160' x 360'; 15' additional space on each side and end; standard football goal posts; good turf; lines marked; field running north and south; adequate watering and drainage system; approximately level.

12. TRACK - One-fourth mile; minimum width 20' except straightaway; 220-yard straightaway, 30' wide; curves banked; curb of wood or concrete; cinders, grasstex or sandy loam surface; drain tile and drainage beds all around the edge. Track should surround speedball or football field.

13. POLE VAULT PITS - Size 14' x 14'; pit filled with foam rubber in net; standards with movable center piece; box for pole hole; sufficient level space for run on cinder or grasstex pathway; edges of pit beveled.

14. LONG JUMP PITS - Size 10' x 16'; pit filled with wet loose sand 12" deep; sufficient level runway.

15. HIGH JUMP PITS - Size 10' x 14'; pit filled with foam rubber in net; standards; sufficient level space for a right, left or straight runway.

16. BLEACHERS - Outside bleachers with minimum seating capacity equal to student body enrollment; safe; not unsightly; toilet facilities for the public, conveniently located.

17. ARCHERY LANES - Size 10' x 100'; good target of standard make; safe; turf.

18. CROQUET COURT - Size 30' x 60'; turf or ground well prepared; level; boundary limits marked.

19. GOLF DRIVING CAGES - Size 10' x 12'; height 12'; constructed of steel frame and small mesh wire; canvas drop at back; good tee.

20. GOLF PUTTING GREENS - Size 5,000 square feet for nine holes; standard turf; standard cups; surrounded by good fence.

21. HORSESHOE COURTS - Size 40' between pegs; iron pegs; pitch board frame around peg 6' x 6'; pitchers box filled with damp clay 6" deep; court on level ground; 10' between different courts; 10' of extra space at end of each court.

22. FENCE - Good quality chain link fence surrounding playground part of school site; fences where needed to control spectators and automobiles.

TO SCORE - For each type of facility, three factors must be considered:

(1) The number of boys enrolled in physical education;
(2) The number of units required;
(3) The quality and condition of each facility.

Points to be given each facility after considering these factors are indicated in the form. The score for each type of facility should be estimated according to how well it meets the standards given, the rating being (a) good, (b) average, (c) poor. Absence of the facility (where required) would score zero. Wherever the facility is not required, i.e., a school with 50 boys would not need a second or third tennis court, an asterisk (*) has been placed and part or all of the number of points allowed for this facility under "score possible" should be given. In no case, can the "total points made" be greater than the "score possible". Under "Number of Units", circle the number of units present which are being scored.

In small schools, because of cost, it may be necessary for boys and girls to use certain play areas in common. Where this is done, the same facility may be judged for both up to a total school enrollment as follows: Tennis courts, 100; for boys' football, soccer, speedball, hard baseball, and for girls' hockey, speedball and soccer, the total minimum number of separate fields, according to total school enrollment, should be as follows: 100 pupils, 1 field; 600 pupils, 2 fields; 1,000 pupils, 3 fields; 1,800 pupils, 4 fields; and, over 1,800 pupils, 5 fields; croquet court and golf driving cage, total enrollment; golf putting green, total enrollment.

(Chart given on following page)

Name of Facility	No. of Units	Boys Enrolled in Physical Education																		Score Possible	Total Points Made
		0 - 50			51 - 150			151 - 300			301 - 500			501 - 900			901 - over				
		a	b	c	a	b	c	a	b	c	a	b	c	a	b	c	a	b	c		
1. Basketball Courts	1	22	18	8	22	18	8	11	9	4	11	9	4	8	5	2	5	4	1	22	
	2	*	*	*	*	*	*	22	18	8	22	18	8	15	11	5	10	8	3		
	3	*	*	*	*	*	*	*	*	*	*	*	*	22	18	8	15	12	5		
	4	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	22	18	8		
2. Handball Courts	1	17	10	5	17	10	5	9	5	2	9	5	2	6	4	1	4	3	1	17	
	2	*	*	*	*	*	*	17	10	5	17	10	5	11	8	4	9	5	2		
	3	*	*	*	*	*	*	*	*	*	*	*	*	17	10	5	12	8	4		
	4	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	17	10	5		
3. Tennis Courts	1	22	18	8	22	18	8	22	18	8	11	9	4	8	5	2	5	4	1	22	
	2	*	*	*	*	*	*	*	*	*	22	18	8	15	11	5	10	8	3		
	3	*	*	*	*	*	*	*	*	*	*	*	*	22	18	8	15	12	5		
	4	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	22	18	8		
4. Badminton Courts	1	8	6	4	8	6	4	4	3	1	4	3	1	4	3	1	4	3	1	8	
	2	*	*	*	*	*	*	8	6	4	8	6	4	5	4	2	5	4	2		
	3	*	*	*	*	*	*	*	*	*	*	*	*	8	6	4	8	6	4		
5. Shot Put Ring	1	8	5	1	8	5	1	8	5	1	8	5	1	8	5	1	8	5	1	8	

(Continued on next page)

Name of Facility	No. of Units	Boys Enrolled in Physical Education																		Score Possible	Total Points Made
		0 - 50			51 - 150			151 - 300			301 - 500			501 - 900			901 - over				
		a	b	c	a	b	c	a	b	c	a	b	c	a	b	c	a	b	c		
6. Volley Ball Courts	1	12	10	5	12	10	5	6	4	2	5	3	1	4	3	1	4	3	1	12	
	2	*	*	*	*	*	*	12	10	5	8	6	4	6	4	2	6	4	2		
	3	*	*	*	*	*	*	*	*	*	12	10	5	8	6	4	8	6	4		
	4	*	*	*	*	*	*	*	*	*	*	*	*	12	10	5	12	10	5		
7. Baseball Diamond	1	14	9	4	14	9	4	14	9	4	14	9	4	14	9	4	14	9	4	14	
8. Softball Diamonds	1	12	10	5	12	10	5	6	4	2	6	4	2	5	3	1	4	3	1	12	
	2	*	*	*	*	*	*	12	10	5	12	10	5	8	6	4	6	4	2		
	3	*	*	*	*	*	*	*	*	*	*	*	*	12	10	5	8	6	4		
	4	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	12	10	5		
9. Football Field	1	20	15	6	20	15	6	20	15	6	20	15	6	20	15	6	20	15	6	20	
10. Soccer Field	1	17	10	5	17	10	5	17	10	5	17	10	5	17	10	5	17	10	5	17	
11. Speedball Field	1	17	10	5	17	10	5	17	10	5	17	10	5	17	10	5	17	10	5	17	
12. Track	1	17	10	5	17	10	5	17	10	5	17	10	5	17	10	5	17	10	5	17	
13. Pole Vault Pits	1	8	6	4	8	6	4	8	6	4	8	6	4	8	6	4	8	6	4	8	

(Continued on next page)

Name of Facility	No. of Units	0 - 50			51 - 150			151 - 300			301 - 500			501 - 900			901 - over			Score Possible	Total Points Made
		a	b	c	a	b	c	a	b	c	a	b	c	a	b	c	a	b	c		
14. Long Jump Pits	1	10	6	2	10	6	2	10	6	2	10	6	2	5	4	1	5	4	1	10	
	2	*	*	*	*	*	*	*	*	*	*	*	*	10	6	2	10	6	2		
15. High Jump Pits	1	10	6	2	10	6	2	10	6	2	10	6	2	5	4	1	5	4	1	10	
	2	*	*	*	*	*	*	*	*	*	*	*	*	10	6	2	10	6	2		
16. Bleachers		8	5	1	8	5	1	8	5	1	8	5	1	8	5	1	8	5	1	8	
17. Archery Lanes	1	8	6	4	8	6	4	8	6	4	4	3	1	4	3	1	4	3	1	8	
	2	*	*	*	*	*	*	*	*	*	8	6	4	8	6	4	8	6	4		
18. Croquet Court	1	8	5	1	8	5	1	8	5	1	8	5	1	8	5	1	8	5	1	8	
19. Golf Driving Cages	1	*	*	*	8	6	4	8	6	4	8	6	4	4	3	1	4	3	1	8	
	2	*	*	*	*	*	*	*	*	*	*	*	*	8	6	4	8	6	4		
20. Golf Putting Greens	1	*	*	*	8	6	4	8	6	4	8	6	4	8	6	4	8	6	4	8	
21. Horseshoe Courts	1	8	6	4	8	6	4	4	3	1	4	3	1	4	3	1	4	3	1	8	
	2	*	*	*	*	*	*	8	6	4	8	6	4	5	4	2	5	4	2		
	3	*	*	*	*	*	*	*	*	*	*	*	*	8	6	4	8	6	4		
22. Fence		10	6	3	10	6	3	10	6	3	10	6	3	10	6	3	10	6	3	10	
																				TOTALS 272	

The total points made_____, divided by 2 equals the score given_____.

Score Possible	Score Given
136	

V - EQUIPMENT

Equipment includes in the main those facilities which are movable and usually need not be replaced as frequently as supplies. Some activities desirable in the physical education program are possible only when certain types of equipment are on hand.

TO SCORE - Commercial equipment varies in kind and quality. Therefore, a detailed description of each type is not attempted. The points indicated in the form are allotted for number, quality, and condition of equipment according to enrollment. The corrective room equipment should include low and high plinths, stall bars, stools, body mats 3' x 6', mirror 6' x 4', weighing scale, horizontal ladder, balance beam, pillows, pedograph, schematograph, and hospital screen. Horizontal bars should be adjustable. Mats 5' x 15' are preferred. Hurdles should be adjustable. Maintenance equipment should include line marker, float, drag, lawn mower, rakes, hoes, shovels, hose, cart, wheelbarrow, sprinklers, cord and roller. (Maintenance work should be done by workmen other than physical education instructors.) In the case of mats, horizontal bars, climbing ropes and hurdles, two rows of numbers appear. One row is points and the other the number of units of equipment judged to be needed according to enrollment.

The score for each type of equipment listed should be estimated according to how well it meets the standards given, the rating being (a) good, (b) average, (c) poor. Absence of the equipment where required would score zero. Wherever the equipment is not required (i.e., a school with 50 boys may not afford a parallel bar), an asterisk (*) has been placed and the number of points allowed for the equipment under "Score Possible" should be given. In no case, can the "Total Points Made" be greater than the "Score Possible".

The school enrollment, where the same piece of equipment may be used by both boys and girls is: piano, 300; mats, 300; corrective room equipment, 600; climbing ropes, 300; scales, 100; maintenance equipment, total school enrollment.

(Chart given on next page)

Name of Equipment	Number Needed	Boys Enrolled in Physical Education																		Score Possible	Total Points Made
		0 - 50			51 - 150			151 - 300			301 - 500			501 - 900			901 - over				
		a	b	c	a	b	c	a	b	c	a	b	c	a	b	c	a	b	c		
1. Piano	1	12	6	3	12	6	3	12	6	3	12	6	3	12	6	3	12	6	3	12	
2. Mats	2-8	15	9	4	15	9	4	15	9	4	15	9	4	15	9	4	15	9	4	15	
		2			3			3			4			6			8				
3. Corrective Room Equipment		*	*	*	18	10	5	18	10	5	18	10	5	18	10	5	18	10	5	18	
4. Horizontal Bars	1-2	10	6	3	10	6	3	10	6	3	10	6	3	10	6	3	10	6	3	10	
		1			1			1			1			2			2				
5. Parallel Bars	1	*	*	*	5	3	1	5	3	1	5	3	1	5	3	1	5	3	1	5	
6. Buck	1	5	3	1	5	3	1	5	3	1	5	3	1	5	3	1	5	3	1	5	
7. Horse	1	*	*	*	*	*	*	5	3	1	5	3	1	5	3	1	5	3	1	5	
8. Climbing Ropes	1-6	6	4	1	6	4	1	6	4	1	6	4	1	6	4	1	6	4	1	6	
		1			2			3			4			5			6				
9. Rings (Pairs)	1	*	*	*	*	*	*	5	3	1	5	3	1	5	3	1	5	3	1	5	
10. Scales	1	9	5	1	9	5	1	9	5	1	9	5	1	9	5	1	9	5	1	9	
11. Uni-Goal	1-4	10	6	3	10	6	3	10	6	3	10	6	3	10	6	3	10	6	3	10	
		1			1			2			2			3			4				

(Continued on Next Page)

Name of Equipment	Number Needed	Boys Enrolled in Physical Education																		Score Possible	Total Points Made
		0 - 50			51 - 150			151 - 300			301 - 500			501 - 900			901 - over				
		a	b	c	a	b	c	a	b	c	a	b	c	a	b	c	a	b	c		
12. Hurdles	10-60	10	6	3	10	6	3	10	6	3	10	6	3	10	6	3	10	6	3	10	
		10			20			20			40			60			60				
13. Maintenance Equipment		18	10	5	18	10	5	18	10	5	18	10	5	10	10	5	18	10	5	18	
																	TOTALS			128	

The total points made_____, divided by 2 equals the score given_____.

Score Possible	Score Given
64	

VI - SUPPLIES (GENERAL)

Supplies include various types of balls, nets, bats, clubs, bases, score books, etc., which must be continually replaced. Not only should supplies be stored on shelves in the storeroom, but a sufficient number must constantly be ready for use so as to permit the rapid acquirement of skills by pupils taking part in the program.

TO SCORE - The number placed in each enrollment column after each supply named is the quantity of each supply judged to be needed annually.

The baseball catcher's outfit should include body protector, shin protectors, mask and mitt; if lime is purchased by the barrel rather than by the sack, estimate in terms of 80-pound sacks. It is assumed sets for croquet, darts, horseshoes, paddle tennis and quoitennis will include everything necessary to play the game. In computing pupil periods for number of clean towels needed daily, include pupil periods in intramural and interschool athletics. Certain types of supplies, such as tennis balls, should be purchased as needed.

If the quantity of supply listed has been available at the school, of good quality and ready for use, then give points allowed under "Score Possible". The total number of points made divided by 2, is the score given.

Name of Supply	Boys Enrolled in Physical Education						Score Possible	Total Points Made
	0-50	51-150	151-300	301-500	501-900	901-over		
1. Archery Arm and Finger Guards	2	2	4	8	10	12	3	
2. Archery Arrows	12	12	24	48	60	72	3	
3. Archery Bows	4	4	6	10	12	14	3	
4. Archery Targets and Easels	2	2	3	3	4	4	3	
5. Baseballs (Hard)	18	24	36	48	72	96	5	
6. Basketballs	4	8	12	18	24	30	16	
7. Footballs	4	6	8	12	18	24	13	
8. Golf Balls	6	12	18	24	30	36	5	
9. Hand Balls	6	12	18	30	40	48	8	
10. Soccer Balls	2	4	6	10	12	18	10	
11. Soft Balls	6	12	18	24	48	60	5	
12. Tennis Balls	12	18	24	36	60	72	8	
13. Volley Balls	2	2	3	4	6	8	7	
14. Baseball Bases (Sets)	1	1	1	1	2	2	3	
15. Softball Bases (Sets)	1	1	2	2	3	4	3	
16. Baseball Bats	6	8	12	18	24	30	4	
17. Softball Bats	6	10	16	20	24	30	4	

(Continued on next page)

Name of Supply	Boys Enrolled in Physical Education						Score Possible	Total Points Made
	0-50	51-150	151-300	301-500	501-900	901-over		
18. Bean Bags	12	15	18	21	24	27	4	
19. Cambric, Various Colored (Yards)	3	6	8	12	18	24	4	
20. Baseball Catcher's Outfits	1	1	1	1	2	2	3	
21. Cross Bars	2	2	3	4	4	6	4	
22. Baseball Gloves	4	4	5	6	7	8	3	
23. Boxing Gloves (Pairs)	4	8	12	14	18	20	4	
24. Golf Clubs (Driver)	4	4	6	6	8	10	3	
25. Golf Clubs (Mashie)	4	4	6	6	8	10	3	
26. Golf Clubs (Mid Iron)	4	4	6	6	8	10	3	
27. Golf Clubs (Putter)	4	4	6	6	8	10	3	
28. Indian Clubs	6	8	10	12	15	18	3	
29. Inflators (Ball)	1	1	1	1	2	2	3	
30. Rawhide Laces	12	15	18	24	36	48	3	
31. Air Slacked Lime (80-lb. sacks)	4	8	12	16	24	36	5	
32. Mending Kits	1	1	1	1	1	1	3	
33. Lacing Needles (Handled)	2	2	3	3	4	4	3	

(Continued on next page)

Name of Supply	Boys Enrolled in Physical Education						Score Possible	Total Points Made
	0-50	51-150	151-300	301-500	501-900	901-over		
34. Tennis Nets	2	2	3	3	4	5	3	
35. Volleyball Nets	2	3	4	5	6	6	3	
36. Pistols	1	1	1	1	2	2	3	
37. Baseball Score Books	1	1	1	2	2	2	3	
38. Basketball Score Books	1	1	2	2	3	3	3	
39. Football Score Books	0	1	1	2	2	3	3	
40. Tennis Score Books	1	1	1	2	3	4	3	
41. Badminton Sets	1	3	4	4	6	6	3	
42. Croquet Sets	1	1	1	1	2	2	3	
43. Dart Sets	1	1	1	1	2	2	3	
44. Horseshoe Sets	1	1	2	2	3	4	3	
45. Shuttle Cocks	6	18	24	24	36	36	3	
46. Shots (8-lb.)	1	1	1	2	2	2	3	
47. Shots (12-lb.)	1	1	1	2	2	2	3	
48. Tape, Black Friction(Rolls)	4	6	10	16	24	30	3	
49. Tape Lines (50-feet)	1	1	2	2	3	3	3	

(Continued on next page)

Name of Supply	Boys Enrolled in Physical Education						Score Possible	Total Points Made
	0-50	51-150	151-300	301-500	501-900	901-over		
50. Tape Lines (100' Steel)	1	1	2	2	3	3	3	
51. Tennis Racquets	4	6	8	12	16	18	5	
52. Towels	A clean towel available daily for each pupil period participation.						13	
53. Vaulting Poles	2	3	4	4	6	6	4	
54. Watches (Game Timer and Stop Watch)	1	1	1	2	2	3	4	
55. Whistles (Instructors)	4	5	6	8	12	18	5	
56. Yarn, White (Balls)	1	1	2	2	3	4	3	
						TOTALS	242	

The total points made_____, divided by 2 equals the score given_____.

Score Possible	Score Given
121	

VII - SUPPLIES (FOR PREVENTION AND EMERGENCY CARE OF INJURIES)

For the prevention of injuries in the instructional period program, intramural athletics, and interscholastic athletics, and for emergency care after injuries occur (first aid), certain supplies are essential. These materials should be carefully selected, carefully labeled, and kept where they are readily available when needed.

TO SCORE - Consider only the supplies on hand for the prevention of injuries in physical education (including intramural and interscholastic athletics) and for the emergency care of injuries (first aid), i.e., the quantity suggested here does not include supplies on hand for use by the physician, nurse or dentist in their school health service work. Estimate the score which should be given each type of supply in terms of amount required for school enrollment. Absence of the supply would yield a zero score. If the required amount of the supply has been on hand during the 12 months just preceding the time of scoring, then allow the full number of points allotted. The total of the points made divided by 2 is the score given.

(Continued on next page)

Name of Supply	Boys Enrolled in Physical Education						Score Possible	Total Points Made
	0-50	51-150	151-300	301-500	501-900	901-over		
1. Absorbent Cotton 4-oz. pkg.	2	2	2	4	6	8	3	
2. Adhesive Tape 1" x 10 yards	4	6	9	12	15	18	3	
3. Adhesive Tape 3" x 10 yards	8	12	18	24	30	36	3	
4. Adhesive Compresses 1" in dozens	4	8	16	24	48	96	3	
5. Alcohol, Rubbing (pint)	2	2	4	4	6	8	3	
6. Applicators, Wood 72 dozen, box	1	1	2	2	3	4	2	
7. Aromatic Spirits of Ammonia (oz.)	1	1	2	2	3	4	3	
8. Bandages, Elastic	3	4	6	8	10	12	3	
9. Bandages, Gauze 1" x 10 yds.	12	15	18	24	36	48	3	
10. Bandages, Gauze 2" x 10 yds.	12	15	18	24	36	48	3	
11. Bandages, Pressure	2	4	6	8	10	12	3	

(Continued on next page)

Name of Supply	Boys Enrolled in Physical Education						Score Possible	Total Points Made
	0-50	51-150	151-300	301-500	501-900	901-over		
12. Bandages, Triangular	4	6	10	14	18	24	2	
13. Felt (square yards)	1	2	3	4	5	6	2	
14. Gauze Squares 3" x 3" (dozen)	3	4	6	8	10	12	3	
15. Mineral Oil (small tubes)	1	1	2	2	3	4	2	
16. Paper Cups (cartons)	1	2	3	4	5	6	2	
17. Safety Pins (dozen)	2	2	3	3	4	4	2	
18. Scissors (pair)	1	1	2	2	3	3	3	
19. Splint Boards (dozen)	2	2	4	4	6	8	3	
20. Tincture of Merthiolate (oz.)	2	3	4	6	8	10	2	
21. Tongue Depressors (gross)	1	1	2	2	3	3	2	
22. Tourniquet (non-elastic)	1	1	2	2	3	3	3	
23. Tweezers (4-in.)	1	1	1	1	2	2	2	
24. Vaseline, oz. jars.	1	1	2	2	3	3	2	
						TOTALS	62	

The total points made_____, divided by 2 equals the score given_____.

Score Possible	Score Given
31	

II. TIME ALLOTMENT FOR PHYSICAL EDUCATION

One of the objectives of physical education is development of many neuromuscular skills. Adequate time at play is necessary for the perfection of these skills. It seems obvious that pupils will have greater opportunity to secure the many contributions to development which are inherent in physical education activities if the time allotment is adequate.

TO SCORE - The time allotment for the instructional period only is measured here; it does not include time which should be spent in practice or in intramural and interschool games. Periods longer than 60 minutes are assumed to be double periods. Locate the number of times physical education is required of each student per week; also locate the number of minutes in the period. In the appropriate square, will be found the points which are to be given as the score. If the length of periods and times per week are not constant, then use averages. Class periods devoted to health instruction are not to be counted as physical education periods. The length of the period includes time used in passing from class to class and also the time used at the beginning and end of the period for dressing.

Times Per Week	Length of Periods in Minutes														
	20	25	30	35	40	45	50	55	60	70	80	90	100	110	120
1	1	1	1	2	2	4	4	5	6	5	5	4	4	2	1
2	4	4	5	6	7	9	12	17	22	17	12	9	7	6	4
3	6	7	9	12	22	34	44	75	81	72	34	22	12	9	6
4	9	11	19	35	62	81	94	100	104	94	62	35	15	11	5
5	12	19	44	69	100	105	108	110	113	108	60	30	12	7	2

Score Possible	Score Given
113	

III. HEALTH EXAMINATION OF PUPILS BY PHYSICIAN, DENTIST AND NURSE.

The physical education program should be adapted to the needs of each pupil. These needs may be determined by periodic referral and special examinations. Certain parts of these examinations must be given by the physician, dentist, or nurse, while other parts may be given by the physical education teacher.

TO SCORE - From the health examination records, determine the extent and frequency of the examination of pupils. Record opposite each item of examination the estimated number of points according to the frequency and percentage of boys examined. If, for example, in the periodic examination, 90% of the boys' health records show a family health history, 10 points should be awarded; for 60%, 6 points, and for 30%, 2 points. Similar interpretations are made for the other items. If certain items of examination are omitted, score them zero.

In some schools, certain items of examination under Units III and IV may be interchanged, but this should not result in loss of points.

Extent of Examination		FREQUENCY OF EXAMINATIONS												Score Possible	Tot. Pts. Made
		Referral Examination When Needed			Special Examination Before Sports Season						Period. Ex. At least once in four years				
					Intramural			Interschool							
	%	90	60	30	90	60	30	90	60	30	90	60	30		
Family Health History		*	*	*	*	*	*	*	*	*	10	6	2	10	
Personal Health Hist		4	3	1	4	3	1	4	3	1	4	3	1	16	
Heart		9	5	1	9	5	1	9	5	1	9	5	1	36	
Lungs		9	5	1	9	5	1	9	5	1	9	5	1	36	
Mouth	Teeth	12	7	2	*	*	*	*	*	*	12	7	2	24	
	Tonsils	12	7	2	*	*	*	*	*	*	12	7	2	24	
	Gums	5	2	1	*	*	*	*	*	*	5	2	1	10	
Ears		7	4	2	*	*	*	*	*	*	7	4	2	14	
Eyes		12	7	2	*	*	*	*	*	*	12	7	2	24	
Neck	Lymph Nodes	4	2	1	4	2	1	4	2	1	4	2	1	16	
	Thyroid	5	2	1	*	*	*	*	*	*	5	2	1	10	
Nose		7	4	2	*	*	*	*	*	*	7	4	2	14	
Throat		4	2	1	4	2	1	4	2	1	4	2	1	16	
Skin		5	2	1	*	*	*	*	*	*	5	2	1	10	
State of Nutrition		5	2	1	5	2	1	5	2	1	5	2	1	20	
												TOTALS		280	

The total points made, divided by 4 equals the score given_____.

Score Possible	Score Given
70	

IV. PHYSICAL EXAMINATION OF PUPILS BY PHYSICAL EDUCATION TEACHER.
(For statement and instructions on scoring, see previous unit.)

Extent of Examination	FREQUENCY OF EXAMINATIONS												Score Possible	Total Pts. Made
	Each Year			Every 2nd Year			Every 3rd Year			Every 4th Year				
%	90	60	30	90	60	30	90	60	30	90	60	30		
Age	*	*	*	*	*	*	*	*	*	6	3	1	6	
Height	8	6	4	7	5	3	6	4	2	5	3	1	8	
Weight	8	6	4	7	5	3	6	4	2	5	3	1	8	
Hearing	10	8	4	8	6	4	6	4	2	4	2	1	10	
Vision	10	8	4	8	6	4	6	4	2	4	2	1	10	
Spine Deviations	10	8	6	8	6	4	6	4	2	4	2	1	10	
Posture	10	8	6	8	6	4	6	4	2	4	2	1	10	
Feet	8	6	4	7	5	3	6	4	2	5	3	1	8	
											TOTALS		70	

The total points made_____, divided by 2 equals the score given_____.

Score Possible	Score Given
35	

V. ASSIGNMENT OF PUPILS TO CLASSES.

To prevent omission or unnecessary repetition of experiences in physical education classes, the program should be graded and should be assigned to classes according to pupils' individual needs as diagnosed through the results of examinations.

TO SCORE - Largely irregular means the assignment of pupils to physical education classes without regard to grade, age, or needs; largely by year in school, means that the individual physical education class is composed almost entirely of freshmen or sophomores, etc.; largely by year in school and efficiency in skills means the grouping of pupils into classes by year and then by low skill, average skill and advanced skill determined by observation, or better still, by giving a battery of skill tests; largely according to individual needs determined through examinations means assignment according to need as found through examinations by physician and teacher, functional tests, ability tests, and achievement tests.

Record the score allotted to the description which most nearly describes the method of assignment being used.

METHOD OF ASSIGNMENT TO CLASSES	Score Possible
Largely irregular	12
Largely by year in school	25
Largely by year in school and efficiency in skills	38
Largely according to individual needs determined through examinations	50

Score Possible	Score Given
50	

VI. SIZE OF CLASSES (NORMAL GROUP)

The optimum size of classes in physical education depends to a large extent upon the nature of the activities offered, the facilities present, and the calibre of the teacher. In the past, it has been assumed that classes in physical education should be considerably larger than classes in academic work. With the realization that pupils need to be taught to play and should have the program adapted constantly to their needs, physical education classes in many high schools have been reduced in size. Pupils doing individual exercises to correct certain defects should be placed in classes smaller than the classes organized for the normal group.

TO SCORE - Record the points allotted opposite the condition which most nearly describes the situation. Unless pupils are not assigned to instructors, first find the total number of boy pupils enrolled in physical education, and then compute the percentage enrolled in classes of 40 or under. If the percentage is less than 85, try computing for the next higher category. The same procedure in scoring is used in Unit VII. When scoring Unit VII in schools with fewer than 151 boys, allow full score if individual arrangements are made instead of a class organized. Ordinarly from five to ten per cent of the pupils should be found doing special corrective work.

Size of Classes	Score Possible
No definite assignment of students to instructors	0
More than 10% of pupils are enrolled in classes over 60	6
90% of pupils enrolled in classes of 60 or under	12
90% of pupils enrolled in classes of 50 or under	25
85% of pupils enrolled in classes of 45 or under	38
85% of pupils enrolled in classes of 40 or under	50

Score Possible	Score Given
50	

VII. SIZE OF CLASSES (CORRECTIVE OR RESTRICTED GROUP)
(For a statement and instructions on scoring, see previous unit.)

Size of Classes	Score Possible
No class or individual arrangement for handicapped group	0
85% of pupils enrolled are in classes of 30 or under	12
80% of pupils enrolled are in classes of 25 or under	23
80% of pupils enrolled are in classes of 20 or under	31

Score Possible	Score Given
31	

VIII. TEACHER LOAD (ASSIGNED TIME)

A teacher should put forth his maximum effort each period of the day whether he teaches ten or forty pupils in the class. Energy must be conserved for the accomplishment of the tasks at hand during the day, week, month and year. A heavy time assignment means less opportunity and inclination to give pupils individual attention.

TO SCORE - Compute the average number of minutes per week each instructor is assigned to duty by the principal or head of the department; consider all instructors who are assigned to the instructional period, intramural athletics or inter-school athletics; consider after-school work according to the amount of time spent, but not to exceed 120 minutes daily; where the teacher has academic classes and classes in physical education, record for his total teaching assignment. Estimate average weekly time where seasonal differences in assignment occur. Record for each instructor in his column, and opposite his assigned time, the number of points allotted; add across and down.

Average number of minutes assigned weekly.	Score Possible	INSTRUCTORS				Total Points
		A	B	C	D	
1500 or less	62					
1501-1600	59					
1601-1700	54					
1701-1800	47					
1801-1900	40					
1901-2000	31					
2001-2100	19					
2101-2200	6					
2201-over	0					
				Totals		

The total points made_____, divided by the number of instructors, equals the score given _____.

Score Possible	Score Given
62	

IX. RECORDS KEPT AND USED

Records in physical education are a necessity. Records must be kept of the results of examinations, the issuance of supplies, of finance connected with the department, and of the individual student's accomplishment.

TO SCORE - Estimate the score for each type of record kept according to completeness, neatness, value and use made of the record. Score zero when the type of record is not kept. The total points made is the score given.

(Chart given on following page)

Type of Record	Score Possible	Total Points Made
Class Roll Record	5	
Enrollment Record (Permanent)	5	
Examination (By Physician) Record	5	
Examination (By Instructor) Record	5	
Record of Issue of Supplies and Equipment	5	
Record of Students' Intramural Athletic Accomplishment	5	
Record of Students' Interscholastic Athletic Accomplishment	5	
Record of Students' Improvement Shown by Skill Tests	5	
Record of Accidents	5	
Record of Finance Connected with Department	5	
Totals	50	

Score Possible	Score Given
50	

X. CREDIT

There is nothing peculiar or sacred about giving credit for work accomplished. Giving credit is a bookkeeping arrangement which gives us a short-cut indication of what the pupil has done according to the teacher's judgment. When credit is given for other subjects, not to give credit for physical education tends to give pupils the impression that physical education is unimportant.

TO SCORE - Locate the points opposite the condition which exists and record as "Score Given".

Credit for Physical Education	Score Possible
No credit given for physical education	0
Credit given but not required for graduation:	
a. Not less than 1 credit out of 16	10
b. Not less than 2 credits out of 16	15
Credit given and required for graduation:	
a. Not less than 1 credit out of 16	20
b. Not less than 2 credits out of 16	25

Score Possible	Score Given
25	

XI. METHODS OF MARKING

School marks are given to pupils taking academic subjects and are meant to represent the teachers' best judgments of the quality of work done by pupils. In and of themselves, pupil marks have little value, but they serve indirectly a useful purpose in indicating to the pupil and others who might see them, the teachers' judgment of the students' work. Marks should be composed of composite judgments on a number of important factors.

D - PROGRAM (ACTIVITIES)
(Variety, Emphasis and Extent of Participation)

I - INSTRUCTIONAL PERIOD

Pupils of high school age should have the development which comes from participation in a large number of physical education activities. Each activity has a different contribution to make to the development of the individual. To come in contact with only a few activities means a limited acquirement in knowledge, skills and attitudes. Instruction in a variety of activities, greater emphasis on those which make ultimately the greater contribution to the life of the individual, and making experience in these activities possible to the great majority of pupils, are the factors which comprise the well-balanced activity program in physical education.

TO SCORE - When scoring this unit, failure to have a large variety of activities in the instructional program causes the school to lose points. By a larger allotment of points to certain activities and by inserting percentages of pupils which should be taught the activities, the relative emphasis and extent of participation are scored. Do not count participation in intramural athletics or interscholastic athletics as they are scored in the units which follow.

In the first column, and opposite each activity, the estimated relative percentage of time which should be devoted by the teacher to instruction is given. Assuming five class periods daily for 180 days each year for four years, we have 3,600 class periods available to each full time teacher. One per cent, therefore, equals approximately 36 class periods. In the three columns, two sets of numbers appear opposite each activity. The upper row represents the percentages of participation for which the lower numbers (which are points) are to be given. To illustrate: 17 points are given to basketball if 80 or more per cent of the boys enrolled in physical education receive the estimated desirable amount of instruction in basketball during the four-year high school period; 10 points are given for basketball if 50 to 79 per cent receive the instruction, etc. Score zero if no instruction is given in the activity. The "points made" for each activity are to be estimated according to the percentage of pupils receiving instruction, and are to be greater or less according to the degree to which the pupils have the opportunity to develop skills in the activity during their school course. The total points appearing in the "points possible" column are greater than the actual score possible in order to give schools some choice of activities. A summation of the "points made" column is the final "score given".

Activities	% Time		Points Given for Extent of Pupil (Boys) Participation			Points Possible	Points Made
1. American Football (Touch)	3	%	70	40	10	9	
		Points	9	5	2		
2. Apparatus (Light & Heavy)	3	%	70	40	10	11	
		Points	11	7	3		
3. Archery	3	%	60	50	20	7	
		Points	7	5	2		
4. Badminton	2	%	80	50	20	7	
		Points	7	5	2		

Activities	% Time	Points Given for Extent of Pupil (Boys) Participation				Points Possible	Points Made
5. Baseball (Hard)	2	%	50	30	10	7	
		Points	7	5	2		
6. Basketball	9	%	80	50	20	17	
		Points	17	10	3		
7. Boating Activities	1	%	50	30	10	5	
		Points	5	3	1		
8. Bowling	1	%	90	60	30	8	
		Points	8	5	2		
9. Boxing	1	%	50	30	10	4	
		Points	4	3	1		
10. Corrective Physical Education	5	%	5	3	1	16	
		Points	16	10	4		
11. Croquet	1/2	%	90	60	30	3	
		Points	3	2	1		
12. Dancing (Square)	2	%	50	30	10	6	
		Points	6	3	1		
13. Dancing (Modern)	1	%	80	50	20	5	
		Points	5	3	1		
14. Dancing (Folk)	2	%	80	50	20	5	
		Points	5	3	1		
15. Dancing (Ballroom)	2	%	80	50	20	6	
		Points	6	3	1		
16. Diving	1/2	%	50	30	10	5	
		Points	5	3	1		
17. Fencing	1/2	%	50	30	10	3	
		Points	3	2	1		
18. Gymnastic Drills	3	%	90	60	30	9	
		Points	9	5	2		
19. Golf	3	%	80	50	20	8	
		Points	8	5	2		
20. Handball	3	%	70	40	10	11	
		Points	11	7	3		
21 Hiking and Mountain Climbing	2	%	90	60	30	5	
		Points	5	3	1		
22. Horseshoes	1/2	%	90	60	30	3	
		Points	3	2	1		
23. Ice Hockey	1	%	50	30	10	4	
		Points	4	3	1		
24. Life Saving and Water Safety	1	%	50	30	10	5	
		Points	5	3	1		
25. Marching	1/2	%	90	60	30	3	
		Points	3	2	1		
26. Softball	4	%	80	50	20	8	
		Points	8	5	2		
27. Pyramid Building	1/2	%	70	40	10	4	
		Points	4	3	1		

Activities	% Time	Points Given for Extent of Pupil (Boys) Participation				Points Possible	Points Made
28. Skating	1/2	%	80	50	20	3	
		Points	3	2	1		
29. Skiing	2	%	80	50	20	12	
		Points	12	7	2		
30. Soccer	4	%	80	50	20	12	
		Points	12	7	2		
31. Speedball	4	%	80	50	20	12	
		Points	12	7	2		
32. Squash	1	%	70	40	10	5	
		Points	5	3	1		
33. Stunts	1	%	70	40	10	7	
		Points	7	5	2		
34. Swimming	8	%	90	60	30	17	
		Points	17	10	3		
35. Tennis	6	%	90	60	30	15	
		Points	15	9	3		
36. 100-Yard Run	1	%	50	30	10	3	
		Points	3	2	1		
37. 220-Yard Run	1/2	%	50	30	10	2	
		Points	2	1	0		
38. 1/4-Mile Run	1/2	%	50	30	10	2	
		Points	2	1	0		
39. 1/2-Mile Run	1/2	%	50	30	10	2	
		Points	2	1	0		
40. Mile Run	1/2	%	50	30	10	2	
		Points	2	1	0		
41. Cross Country Running	1/2	%	70	40	10	2	
		Points	2	1	0		
42. Discus Throw	1/2	%	50	30	10	2	
		Points	2	1	0		
43. Hurdles (Low & High)	1	%	50	30	10	2	
		Points	2	1	0		
44. Long Jump	1/2	%	70	40	10	2	
		Points	2	1	0		
45. High Jump	1/2	%	70	40	10	2	
		Points	2	1	0		
46. Javelin Throw	1/2	%	50	30	10	2	
		Points	2	1	0		
47. Pole Vault	1/2	%	50	30	10	2	
		Points	2	1	0		
48. Shot Put	1/2	%	50	30	10	2	
		Points	2	1	0		
49. Tumbling	3	%	70	40	10	5	
		Points	5	3	1		
50. Volley Ball	3	%	90	60	30	10	
		Points	10	7	3		
51. Wrestling	3	%	50	30	10	4	
		Points	4	3	1		
Totals	100					313	

Out of 313 possible points, 283 points is the maximum number which is allowed. The total points made (not to exceed 283) is the score given.	Score Possible	Score Given
	283	

II - INTRAMURAL ATHLETICS

The time allotment granted physical education in the high school, and the large number of pupils to be taught with limited supplies and facilities, makes it quite impossible for pupils to acquire during the instructional period a desirable amount of efficiency in neuromuscular skills. It is important that their experiences be extensive enough to yield an intelligent appreciation of every activity offered in which they are able to participate. To give pupils this opportunity and to provide them with wholesome recreation during their leisure, the physical education department should carry on an extensive intramural athletic program. It is desirable to have a large percentage of the enrollment take part in many activities rather than to have a few, or even a large number, take part in one activity.

TO SCORE - In the enrollment columns and opposite each activity listed there appears the minimum number of different boys who are expected to participate in a well organized intramural athletic program. Using the points allotted in the "points possible" column, estimate the number of these points which should be given to each activity according to how well the school meets the standards set. Each pupil within the minimum number suggested must have participated in the activity at least three times within the twelve months preceding the time of scoring, if he is to be counted. Score zero for each activity where no intramural program exists. Allow the full number of points for activities where they are starred. The total points possible (181) is greater than the "score possible" (142) to allow for a choice as each school is not expected to have an intramural program in all the activities listed. The program is not classed as intramural unless it takes place outside of the instructional class period.

(Chart given on following page)

Activities	Boys Enrolled in Physical Education						Score Possible	Total Points Made
	0-50	51-150	151-300	301-500	501-900	901-over		
19. Tennis	6	12	20	30	60	90	10	
20. 100-Yard Run	8	16	32	48	64	96	5	
21. Relay Running	8	16	32	48	64	96	6	
22. Hurdles (Low and High)	4	8	12	16	24	32	3	
23. Long Jump	8	16	32	48	64	96	4	
24. 220-Yard Run	4	8	12	16	24	32	3	
25. Quarter-Mile Run	4	8	12	16	24	32	3	
26. Half-Mile Run	4	8	12	16	24	32	3	
27. Mile Run	4	8	12	16	24	32	3	
28. Cross Country Run	4	8	12	16	24	32	3	
29. Discus Throw	4	8	12	16	24	32	2	
30. High Jump	8	16	32	48	64	96	4	
31. Javelin Throw	4	8	12	16	24	32	2	
32. Pole Vault	4	8	12	16	24	32	3	
33. Shot Put	4	8	12	16	24	32	3	
34. Volley Ball	12	24	48	84	120	156	10	
35. Wrestling	6	12	20	30	60	90	5	
						TOTALS	181	

Out of 181 possible points, 142 points is the maximum number which is allowed. The total points made (not

Score Possible _____ Score Given _____

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