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THE STATUS OF HEALTH AND PHYSICAL EDUCATION IN THE SECONDARY SCHOOLS OF KENTUCKY (1953-54)

THESIS

A thesis submitted in partial fulfillment of the requirements for the degree of Master of Arts at the University of Kentucky

By

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1954

FOREWORD

This material is the result of a study of the health and physical education programs in 100 Kentucky High Schools, for the year 1952-53. The school programs which were studied are located throughout the state and are representative of various sizes and types of high schools.

This study is a part of a national study, and affords bases and opportunities for comparing the health and physical education programs of Kentucky High Schools with those of other states. This opportunity for comparison constitutes one of the major values of this research.

Credit for the materials and preparation of this study belongs to Mr. William L. Kruse, graduate student in physical education at the University of Kentucky. The character of this study is such that it is now accorded strong recommendation by the State Department of Education for publication as an educational bulletin.
August 1954

WENDELL P. BUTLER,
State Superintendent of Public Instruction

ABSTRACT OF THESIS

THE STATUS OF HEALTH AND PHYSICAL EDUCATION IN THE SECONDARY SCHOOLS OF KENTUCKY (1953-54)

A survey of health and physical education in 100 Kentucky secondary schools selected by random sampling was undertaken in cooperation with a national survey sponsored by the Committee on Curriculum Research of the College Physical Education Association. Realizing the need for a standardized program the committee developed the La Porte Score Card No. II as a means of evaluating health and physical education programs in secondary schools. This score card which covers the ten recognized major areas of health and physical education was applied to the Kentucky secondary schools. The techniques outlined by the Score Card and Committee on Curriculum Research were employed by the Author in conducting the Survey.

According to the findings of fifteen cooperating states Kentucky ranks approximately eighth in all the major areas except the medical examination and health service in which the schools ranked second to New York. Before Kentucky Secondary schools can improve their status in health and physical education it will be necessary to provide better indoor and outdoor facilities and adopt a minimum standards program in physical education.

BIOGRAPHICAL SKETCH

The author of this thesis was born May 3, 1923 in Delair, New Jersey. He attended the Pine Hill Grammar School, Pine Hill, New Jersey and graduated from the Lower Camden County Regional High School, Lindenwold, New Jersey, in June 1941. In August, 1950, he received his B. S. degree in physical education at the State University of Iowa, Iowa City, Iowa. In the spring of 1952 he began his work for a master degree in physical education at the University of Kentucky, Lexington, Kentucky.

William L. Kruse

ACKNOWLEDGMENT

The writer is greatly indebted to the assistance obtained from Dr. C. W. Hackensmith, Graduate Advisor, University of Kentucky and to the Kentucky Tuberculosis Association whose very generous grant enabled the author to conduct this survey.

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CHAPTER I

INTRODUCTION

A survey of health and physical education programs in Kentucky secondary schools was undertaken in cooperation with a national study sponsored by the College Physical Education Association with Dr. Karl W. Bookwalter, Director of the Bureau of School Services, Indiana University as director. In the beginning, 1953, six states agreed to cooperate in the national survey and, by the middle of 1954, a total of fifteen states had completed surveys of the status of health and physical education programs in the secondary schools. Kentucky was one of the last nine states to agree to conduct a survey.

The College Physical Education Association through the long standing Committee on Curriculum Research, guided by Dr. Ralph La Porte, Chairman, has attempted to analyze and evaluate health and physical education programs in both elementary and secondary schools with these objectives in mind:

1. To set up standards for a sound educational program in health and physical education available to every child and adolescent in the United States.
2. To set up standards in health and physical education programs flexible enough to meet variations of geographic location, climate and facilities.
3. To set up standards on a nation-wide basis in health and physical education programs of such a nature that a pupil might easily transfer from one school to another in any area of the United States without loss of time or repetition.

Realizing the need for a standardized program the Committee on Curriculum Research of the College Physical Education Association developed a score card which evaluates programs of health and physical education in elementary and secondary schools. This score card known as the La Porte Score Card Numbers I and II,[1] covers the ten recognized major areas of health and physical education which include the following: (1) Program of Activities, (2) Outdoor Areas, (3) Indoor Areas, (4) Locker and Shower Areas, (5) Swimming Pool, (6) Supplies and Equipment, (7) Medical Examinations

1. William R. La Porte, *The Physical Education Curriculum* (Los Angeles: University of California Press, 1951, pp. 72-86.)

and Health Service, (8) Modified-Individual (Corrective) Activities, (9) Organization and Administration of Class Programs and (10) Administration of Intramural and Interschool Athletics. This score card was developed after twenty-three years of intensive study by the Committee on Curriculum Research of the College Physical Education Association assisted by hundreds of representative physical education supervisors throughout the United States. The La Porte Card Number II is intended as a measuring device for the purpose of evaluating the physical education program and general health, recreation, and safety provisions of secondary schools. The purpose of the card is to center attention upon the characteristics of a good program and to provide the school an opportunity to compare what it is offering somewhat objectively with these characteristics. This evaluation should show obvious weaknesses that need improvement rather than to show a critical rating of a school. This score card was the evaluation device utilized by the author in surveying the health and physical education programs of Kentuckys' secondary schools.

The Kentucky Tuberculosis Association became interested in this project and aided the study by contributing a generous grant to the author enabling him to complete the survey for the State of Kentucky. This study was further aided by the Department of Physical Education, University of Kentucky, which purchased the necessary score cards for the survey.

STATEMENT OF THE PROBLEM

The problem of this study is to determine the status of boys' and girls' health and physical education programs in Kentucky secondary schools with the standards set forth in the La Porte Score Card Number II.

NEED FOR THE STUDY

A six year period has elapsed since the last statewide survey of health and physical education programs of secondary schools in Kentucky was undertaken. This lapse of time should be sufficient to determine whether or not Kentucky has advanced in the programs offered now in comparison with the last statewide survey and previous ones.

In the past twenty years there have been four statewide surveys of the status of health and physical education in Kentucky secondary schools. Three smaller surveys of a local nature have been made but these will not be reviewed as they are not representative of the State.

C. H. Jones,[2] in 1933, made the first statewide survey of physical education programs in the secondary schools of Kentucky. The results of his survey which included 125 secondary schools may be best summarized in his own words:

> In this chapter it was pointed out that an extremely small number of schools possessed efficient programs in physical education; it was shown that very few administrators carefully supervised the examination and classification of students for physical education; quotations of statistics indicated that the facilities were very poor and that those which were available obviously were designed to further the interests of interscholastic activities was scant and ill-adapted to the needs of general physical education; and finally an examination of the records of one hundred and fifty teachers of physical education in Kentucky were poorly trained and were selected for positions on the basis of their achievements in and knowledge of competitive athletic activities rather than for the amount of professional training they had received.[3]

Regarding the status of physical education in Kentucky during 1933 Jones in his Summary and Recommendations has this to say:

> And last but not least, he (author) has rather definitely intimated that the excessive popularity of interscholastic athletics has in many ways, reacted with extreme disfavor upon the possibility of organizing a more comprehensive physical activity program for all the pupils in all the high schools of the state.[4]

The second statewide survey of health and physical education in Kentucky secondary schools was conducted during 1945-46 by C. H. Wyatt.[5] Through the assistance of the Kentucky State Department of Education, Division of Health and Physical Education and the University of Kentucky, Department of Physical Education, Wyatt was able to complete his survey of health and physical education in secondary schools. The results of his study are best summarized in the educational bulletin published by the Kentucky State Department of Education:

> The present physical education program in the secondary schools of Kentucky (which is marked by the small per cent of the total number of students being provided for) with its lack of medical examinations prior to assignment to classes, lack of uni-

2. C. H. Jones, "Survey of Physical Education in Kentucky and the Need for a State School Program," Unpublished Master's thesis, Lexington: University of Kentucky, 1933.
3. *Ibid.*, pp. 168-69.
4. *Ibid.*, p. 171.
5. C. H. Wyatt, "The Status of Health and Physical Education in Secondary Schools in Kentucky." (1945-46), p. 471 State Department of Educational Bulletin No. 5.

forms, lack of opportunity for showers following activity periods, lack of sufficient time for receiving instruction, lack of variety programs, lack of equal opportunity for girls, lack of provision for the handicapped student, lack of adequate facilities and equipment; lack of credit recognition and lack of trained personnel for conducting the program fails woefully to measure up to the standards of even the most conservative program.[6]

Listed below are ten specific facts in Wyatt's survey that present the true picture of the physical education and health programs in Kentucky secondary schools at the time of this survey.

1. Out of the 484 schools reporting in the survey one-third or 163 offered physical education and 15.9 per cent made it a requirement.
2. Eight schools gave credit for physical education.
3. Physical education classes met two periods per week with the average class meeting of forty-five minutes.
4. The physical education program consisted of team games, seasonal sports, and calisthenics. There was more variety of activity in city and private schools than in county schools.
5. Attendance was the factor most frequently checked as the basis for determining grades, followed in order by effort, cooperation, conduct, improvement, skill tests, and posture.
6. Of the 163 schools reporting, 55.2 per cent required uniforms in classes; 57.2 per cent required showers after class activity; 33.1 per cent furnished towels and soap; 2 per cent conducted special classes for handicapped pupils; and 12.7 per cent required physical examinations prior to assignment to activity classes.
7. In coeducational high schools the physical education programs for girls were frequently limited to what could be organized after the boys' needs were met.
8. Of the 308 physical education teachers, 252 were on part time and fifty-six on full time. Slightly over one-half (50.6 per cent) of the teachers had majors or minors in physical education.
9. One hundred and ninety-eight schools, or 40.3 per cent said that they sponsored an intramural program. The three chief activities of the intramural program were basketball, softball, and volleyball.
10. Basketball was played interscholastically by more than three times as many high schools as any other game. In county and private schools the next best most popular sport was baseball and in the city schools it was football.

Rankin,[7] in 1947, completed a statewide survey of health and

6. *Ibid.*, p. 471.
7. Rome Rankin, "A Survey of Physical Education for Secondary Schools in Kentucky with a Suggested Program," Unpublished Doctor's Dissertation, University of Kentucky, 1947.

physical education programs in Kentucky secondary schools. Rankin surveyed sixty-six schools selected by random sampling, through visitation, inspection of the school plant and interviews with school administrators. The results of Rankin's survey substantiated those of Wyatt's and the facts of his study may be summarized as follows:

1. Fifty-five of the sixty-six schools visited had an outdoor play area which averaged two acres.
2. The gymnasiums conformed to the minimum standards established by the American Association for Health, Physical Education and Recreation, but were lacking in facilities for an adequate physical education program.
3. Less than half the schools had the locker rooms well ventilated and well lighted, but a few more than half had them well heated.
4. Only twenty-four schools provided a physical education program for boys and fifteen provided a program for girls.
5. None of the schools provided a health examination, a modified program for the physically handicapped, and a program of intramural sports for girls and boys.
6. Only one school had a course of study in physical education.
7. All of the schools engaged in interscholastic sports, but only thirty-eight schools considered athletics a part of physical education.
8. Less than one-third of the schools required the parents consent and less than one-half made a health examination prerequisite to interscholastic competition.
9. Fewer than one-third of the schools insured participants in interscholastic competition against injury.

Hackensmith,[8] in 1948, made a survey of health programs in sixty-eight secondary schools of Kentucky. This survey covered the health problems; the field of physical education occupied a small section of this survey. Hackensmith found the following eight specific points in regards to health and physical education which were not conducive to the childs' health.

1. One of five schools surveyed did not have sufficient space about the immediate school site to furnish a play area.
2. Approximately 20 per cent of the schools had an unsatisfactory water supply.
3. According to standards of the American Institute of Architects too many Kentucky school buildings were in the lower classification.

8. C. W. Hackensmith, "Health Problems in the Secondary Schools of Kentucky and Suggestions for Implementing Health Services, Instruction, and Policies," Dissertation, Columbus: Ohio State University, 1948.

4. Forty per cent of the schools surveyed complied with the American Standard Association requirements for good lighting, 8-12 foot candles, and only 23 per cent satisfied the recommended standard of 15 foot candles.

5. Eighteen per cent of the schools provided outdoor toilets which were not maintained according to the sanitary standards recommended by the State Board of Health.

6. Gymnasiums, in general, were constructed to house and accommodate basketball, and shower and locker room facilities were found inadequate for the conduct of a satisfactory program of physical education for boys and girls.

7. Seven per cent of the schools used stoves as a source of heat and the majority of the schools with a modern heating system did not operate them efficiently.

8. Approximately 1 per cent of the schools were constructed of fire resistent materials and 16 per cent were devoid of fire protection.[9]

If the surveys of Jones, Wyatt, Rankin, and Hackensmith may be used as a criteria for evaluating the physical education and health programs in the State of Kentucky, then it can be said that these programs have been slow to develop and that the programs are inadequate.

The following points were agreed upon by each of the surveyors in their reports:

1. In coeducational secondary schools the physical education and health programs for girls were frequently limited to what could be organized after the boys' needs were met.

2. Facilities were below standard and those that were available were obviously designed to further the interests of interscholastic athletics.

3. Lack of trained personnel with an interest in physical education.

4. The physical education programs failed to measure up to even the minimum standards.

5. There is an over-emphasis of basketball in the school programs.

6. None of the schools surveyed provided a modified program for the physically handicapped or an adequate program of intramural sports for girls and boys.

7. Facilities were woefully inadequate for a varied program aimed at meeting the needs and interests of the majority of the pupils.

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9. *Ibid.*, (Abstract) pp. 6-7.

SIGNIFICANCE OF STUDY

The results of this survey should serve as a means of stimulation to the state legislature and educational leaders of the State of Kentucky in that they might promote the best possible health and physical education programs or at least improve the significant weaknesses.

From the results of this survey the State of Kentucky can make comparisons with the results obtained by other states included in the national survey. Area and individual items scores can also be compared.

Since a minimum standard program in physical education has never been established for the secondary schools of Kentucky, educational leaders may now establish such standards from the items employed in this survey.

CHAPTER II

CHOICE OF MEASURING DEVICE

To the author's knowledge only three types of score cards other than the La Porte Score Cards I and II have been developed to evaluate health and physical education programs for secondary schools. These score cards include (1) Dearborn Check List,[10] (2) California Score Card,[11] and (3) Utah Revision of the California Score Card.[12]

The Dearborn Check List pertains only to health items and healthful aspects of the school environment. Conferences are required with health workers in a school, from the school physician to the custodian. Physical education occupied but a small section of this check list.

A score card edited in 1931 by Neilson called the California Score Card was also developed to evaluate health and physical education programs in secondary schools. This card measures such abstract items as sense of humor, honesty, social adaptability, and trustworthiness. One of the weaknesses of this score card is that it measures the physical fitness of instructors and uses class records as well as grade sheets of previous years in order to score the items. This technique involves too much paper work and the practicability of the card is diminished.

The Utah Revision of the California Score Card was developed by Hall and other physical educators in Utah. This score card is similar to the California score card but is slightly different in that points are scored for each item and the number of items employed. For this survey this card is not appropriate because:

> The score card (Utah Revision of the California Score Card) is not intended for use by inspectors. It should be used voluntarily by

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10. T. H. Dearborn, *A Check List for the Survey of Health and Physical Education Programs in Secondary Schools*, (California: Stanford University Press, 1940), p. 23.
11. California State Department of Education, *A Score Card for Evaluating Physical Education Programs for High School Boys*, (California: State Printing Office, 1931), p. 46.
12. Vaughn Hall, *A Score Card for the Evaluation of Physical Education Programs for High School Boys*, (Utah: Department of Public Instruction, 1949), p. 7.

schools on a check list to locate particular points where improvement in their programs can be made. The value of the score card is not so much in the total score as in the analysis of the detailed score of each unit.[13]

PROCEDURE FOR SELECTION OF SCHOOLS

As this study is part of a national survey on health and physical education programs in secondary schools employing the La Porte Score Card Number II, it was necessary to follow the recommended procedures established by the Committee on Curriculum Research of the College Physical Education Association in the selection of schools. The following rules were established by this committee.

1. There shall be no less than 100 schools surveyed in each cooperating state.
2. The schools shall be senior high schools or at least shall contain grades 10, 11, and 12 in the student population.
3. The school sizes of each school in the state and the township, town or city sizes shall be recorded for each school surveyed.
4. The number of schools picked at random for the state sample in each "school size-town size" cell shall be in proportion to the number of schools in each cell in the entire state population of schools.[14]

Utilizing the basic categorizations suggested by the *Research Bulletin* of the National Educational Association[15] and adjusting by subdividing to fit distributions in Kentucky, the schools were classified in terms of town size and by school size. The sizes of the towns in which the schools were located were secured from the 1950 census report from the *Rand McNally Commercial Atlas and Marketing Guide.*[16]

The size of the particular school was secured from the Kentucky Public School Directory[17] provided by the Kentucky Department of

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13. *Ibid.*, p. 9.
14. K. W. Bookwalter, (Program Report Number 3, National Survey of Secondary School Programs of Health and Physical Education by La Porte Score Card) School of Health, Physical Education, and Recreation, Indiana University, Bloomington, Indiana. Sept., 1952.
15. Research Division, N.E.A., Holland, Frank W., Director, "Excerpts from Questionnaire Sent to Teachers," Research Bulletin, 20:49, February, 1951.
16. Rand McNally and Company, *Rand McNally Commercial Atlas and Marketing Guide, Eighty-Third Edition,* Rand McNally and Company, New York, 1952, pp. 174-176.
17. Kentucky Department of Education, *Kentucky Public School Directory, 1952-53,* Department of Education, State of Kentucky, Frankfort, 1952.

Education. The stratification of all schools formed the group of cells shown in Table I (page 12).

One hundred schools comprized approximately 18 per cent of the total of 553 schools in Kentucky. Lindquists' *Statistical Analysis in Educational Research*[18] was employed to secure the table of random numbers in order to determine the number of schools to be surveyed from each cell. The 100 secondary schools selected for the State of Kentucky may be found in Appendix A.

The number of schools representing 18 per cent of the schools in each cell was calculated and that figure specified the number of schools to be chosen by random sampling in a particular cell; for example, in cell one, 18 per cent of fifty schools was found to be nine, so nine schools was the number designated to be chosen at random from cell number one. The distribution of the selected schools is shown on the map of Kentucky in Fig. 1, page 424.

TABLE I

RESULT OF THE RANDOM SAMPLING BASED ON TOWN AND SCHOOL SIZE OF 553 KENTUCKY SECONDARY SCHOOLS

School Size	Town Size 0-499	500-1499	1500-9999	10,000 and up
0 to 99	Cell No. 1 50 Schools 18%-9	Cell No. 2 33 Schools 18%-6	Cell No. 3 36 Schools 18%-7	Cell No. 4 13 Schools 18%-2
100 to 199	Cell No. 5 71 Schools 18%-13	Cell No. 6 53 Schools 18%-10	Cell No. 7 36 Schools 18%-7	Cell No. 8 12 Schools 18%-2
200 to 299	Cell No. 9 36 Schools 18%-6	Cell No. 10 26 Schools 18%-4	Cell No. 11 40 Schools 18%-7	Cell No. 12 13 Schools 18%-2
300 to 399	Cell No. 13 9 Schools 18%-2	Cell No. 14 11 Schools 18%-2	Cell No. 15 20 Schools 18%-4	Cell No. 16 11 Schools 18%-2
400 to 499	Cell No. 17 1 School 18%-1	Cell No. 18 8 Schools 18%-1	Cell No. 19 13 Schools 18%-2	Cell No. 20 4 Schools 18%-1
500 up	Cell No. 21 3 Schools 18%-1	Cell No. 22 9 Schools 18%-2	Cell No. 23 10 Schools 18%-2	Cell No. 24 25 Schools 18%-5

18. E. F. Lindquist, *Statistical Analysis in Educational Research*, (Chicago: Houghton, Mifflin Company, 1940), pp. 262-264.

METHOD OF STUDY

The town, county, and city in which the 100 selected secondary schools were located was designated on a Rand McNally road map. This map was used as a guide to plan the itinerary.

Using Lexington as the home base the trips were planned on a weekly basis, in order that the author would arrive at Lexington at the end of the week. He would then be able to make plans for the coming week and would be able to receive advice and recommendations from his advisor for the forthcoming trip. It required a period of eight weeks to complete the survey of the 100 selected secondary schools.

The data were organized as directed by Bookwalter and certain techniques were observed. Before the score card was applied to any of the schools involved in the ultimate sample, the surveyor observed the following regulations; namely to

1. Completely familarize himself and a colleague with the La Porte Score Card Number II.
2. Apply the Score Card to a selected high school convenient to the surveyor and his colleague and compare the results with those of a similar independent application by his colleague. (This person was chosen by the surveyor because of equal acquaintance with the Score Card and with physical education in the state.)
   a. There should be a 95 per cent or better agreement between scores of **all** items.
   b. The surveyor and his colleague should discuss the items upon which there were disagreement and come to complete agreement.
3. The two should again rate a second school independently and again compare and discuss the items upon which there were not complete agreement.
4. The surveyor alone should rate and re-rate at least two other trial schools of his choice and come to an exact agreement on items to at least 95 per cent effectiveness.[19]

These procedures were complied with and the final survey was undertaken. At each school visited the school principal or the physical education instructor was contacted and the score card was applied to their program. The interview was the chief method of evaluating the program and was further aided by observation in a conducted tour of the school and its facilities.

19. Bookwalter, *op. cit.*, p. 2.

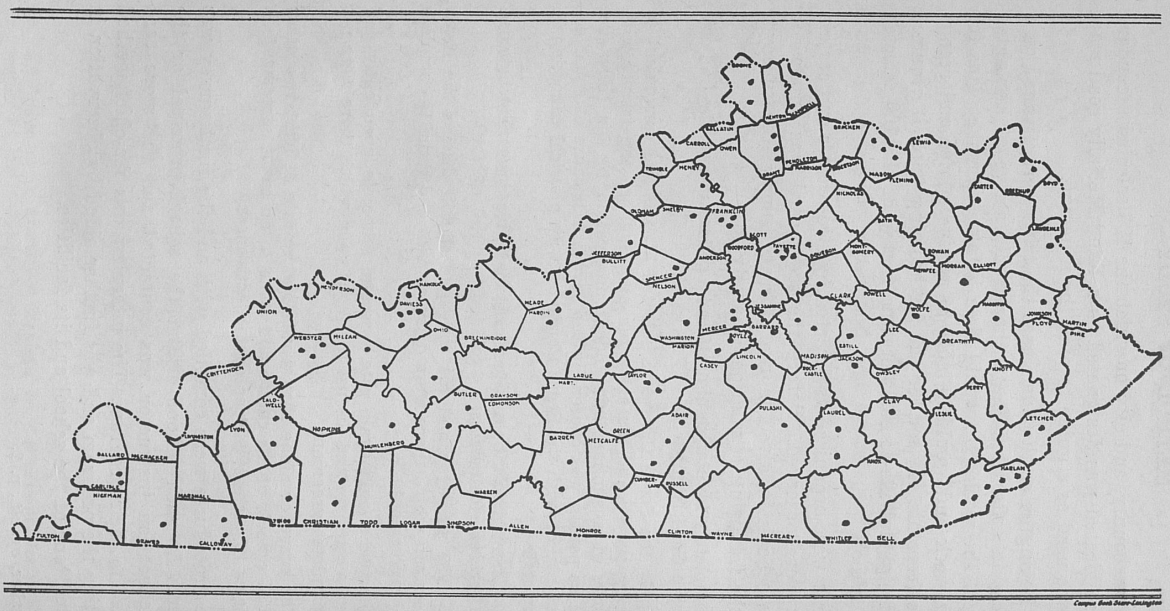

Fig. 1. --Distribution of the 100 Kentucky Secondary Schools Selected by the Random Sampling Method according to County

Fig. 1. --Distribution of the 100 Kentucky Secondary Schools Selected by the Random Sampling Method according to County

TREATMENT OF DATA

With the data obtained from this survey it was then necessary to assemble the material into some definite order for satisfactory treatment.

Since the La Porte Score Card Number II consists of ten major areas it was decided to set up ten individual folders, one for each major area. Each folder contained ten mimeographed sheets of paper, each paper representing one item under that area. The mimeographed sheets of paper contained the following information: (1) the names of the 100 selected schools, (2) a column indicating why the points were awarded for the item, and (3) a column for the total points given for the item. The folders and the mimeographed sheets served as master sheets and the information from each La Porte Score Card Number II was transferred to these master sheets. On the completion of these details the total points were compiled at the bottom of each mimeographed sheet. An item analysis table was constructed to show the average for each of the major areas. This item analysis table will be discussed in the following chapter.

CHAPTER III

AN EVALUATION OF THE PROGRAM OF ACTIVITIES OF 100 KENTUCKY SECONDARY SCHOOLS

It is the purpose of this chapter to make an area and item analysis of the program of activities conducted in Kentucky secondary schools based on the scores secured through the use of the La Porte Score Card Number II. The average area scores and item scores for the 100 secondary schools have been computed and an average established in Appendix B. In most cases a given item ranges from one to three points if the program meets the standards outlined by the La Porte Score Card. If the evaluation did not approximate one point, the item was then scored as a zero.

The area and item scores of six cooperating states are also shown as a means of comparison with the State of Kentucky in this tables. Area and item scores of the six states have been averaged together to form one average for each area and item. The area and item scores of these states will not be reviewed.

Area-Program of Activities: The items in this area are devoted to developing a sound program of activities as outlined by La Porte[20] in the *Physical Education Curriculum.* In order to develop a sound program the following items were taken into consideration: (1) types of activities, (2) type of instruction, (3) time devoted daily to physical education, (4) intramural program, (5) development of a yearly program, (6) revisions needed in the program, (7) maintenance of the plant, (8) correlation of the health program with other departments, (9) safety education program, and (10) efforts to encourage faculty recreation.

The average area score of the program of activities attained by the 100 selected Kentucky secondary schools was found to be .94 as compared to .76 received by the combined area scores of six cooperating states as listed in Appendix B.

Analysis of Specific Items in the Program: According to the Committee on Curriculum Research of the College Physical Education Association the content of the core and elective programs of a

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20. La Porte, *op. cit.,* pp. 30-40.

school should be distributed over gymnastics, rhythms, aquatics, individual sports, and team sports in order to have a well-rounded program of activities. If a school devoted not less than 6 per cent of the time to each of these activities, it was possible for the institution to score one point; if not less than 9 per cent of the time was devoted to the five activities, two points were awarded; and if not less than 12 per cent of the time was devoted to each type of activity, three points were awarded to the item. Tabulating the results of this item for the 100 selected Kentucky secondary schools the author found that thirty-three schools earned a score of zero; forty-nine schools received one point; seventeen schools were awarded two points; and only one school received the maximum amount, or three points. It was found that the average score for this item was .86 compared to .68, the combined score of six cooperating states. Since a point of one is considered just fair for this item, it must be noted that the 100 selected schools were below the minimum standard.

In the program of activities eight per cent of the schools included some form of rhythms such as folk dances, square dances, and social dances. These activities were made available to the girls and were taught only in those schools which provided women physical education instructors.

The number of schools that did not require physical education as a regular subject was found to be thirteen. One school in particular stands out in the mind of the author from the statement made by the principal who said, "We do not require physical education in our school as we have no one to teach the subject. The teacher we formerly employed to teach physical education resigned and went across the river to Ohio and took a similar position at a higher salary. We will not offer physical education until we can find some one to fill the vacancy."

Six schools offered some form of gymnastics, mostly in the form of tumbling. Ninety-four schools failed to offer gymnastics in the program of activities as they lacked the proper facilities and equipment to carry on this activity. The only pieces of gymnastic equipment noted in the 100 selected schools were one parallel bars and two trampolines.

Apparently one of the main reasons there is an unsatisfactory gymnastic program in the secondary schools of Kentucky is that the state as a whole lacks the qualified personnel required to teach

this activity. It is apparent that the South lacks the "foreign element" which has been responsible for introducing and promoting gymnastics in the northern schools.

An aquatic program is not evident in a single school in the State of Kentucky. The obvious reason for this inadequacy is that not one school of the 553 secondary schools in Kentucky is equipped with a swimming pool in its physical plant. Evidently this is due to economic reasons. A more detailed discussion of swimming pools will be given in Chapter V.

Team sports were found to be very prominent in the 100 selected school programs of activities. This fact was also found true in the surveys of Jones[21] and Wyatt.[22] Basketball was the most popular team sport played followed by softball and volleyball in the program of activities.

Individual sports were found lacking in eighty-eight schools. For those schools which offered individual sports in the program of activities for physical education, table tennis was the activity most frequently played followed by shuffleboard, badminton, deck tennis, and ariel darts. An overemphasis of basketball in the program of activities, conducted in the secondary schools of Kentucky, apparently is responsible for the curtailment of individual sports in the same program.

To meet the standards set by the Committee on Curriculum Research of the College Physical Education Association,[23] the program of activity should call for a systematic class instruction in fundamentals on the "block" or "unit of work" basis, i.e., continuous daily instruction in an activity from three to six weeks. Thirty schools failed to have any definite system of instruction; forty schools had a definite system of instruction; twenty-seven schools had systematic instruction other than the block program, and one school used systematic block instruction. Basketball was found to be played in all seasons as "little instruction was required for this sport." Other sports were played outdoors without instruction, when the weather was permissible.

The length of the physical education class period was not uniform in all the schools offering this subject, but the forty-five

21. Jones, *op. cit.*, p. 121.
22. S. H. Wyatt, "The Status of Health and Physical Education in Secondary Schools in Kentucky," (1945-46). Unpublished Master's thesis, University of Kentucky, 1946, pp. 48-50.
23. La Porte, *op. cit.*, pp. 36-40.

minute period twice a week was most commonly used. Twenty schools failed to meet the requirement of two periods per week suggested by the Committee on Curriculum Research of the College Physical Education Association. Fifty-seven schools met for two periods a week; six schools met for four periods a week; and fifteen schools had activity classes five periods per week. Jones[24] in his survey revealed that the activity class met twice a week for a forty-five minute period. La Porte[25] states that the activity class period should meet five days per week from forty-five to sixty minute periods.

"All schools," according to Rankin, "should have a well organized program of intramural sports for boys and girls."[26] The importance of intramurals as a part of the physical education program is stressed by Mitchell[27] and Forsythe.[28] This relationship is evidently not apparent in the school sof this survey since forty-four schools had no definite intramural program; forty-five schools had a *fair* intramural program according to the standards suggested by La Porte;[29] while only eleven schools had what was considered a *good* intramural program. This item when averaged for the 100 schools was found to be .67 compared to the overall average of .58 for six other cooperating states. The three chief activities of the intramural programs of Kentucky high schools are basketball, table tennis, and volleyball. Jones[30] states in his survey that basketball was most frequently played in the intramural program, followed by baseball, track, and tennis. Wyatt[31] also found basketball most frequently played, followed by softball and volleyball.

Perhaps one of the main reasons for the lack of definite intramural programs in the Kentucky secondary schools is because of the consolidation of the schools. Many schools transport their pupils by buses which arrive just in time for classes. At the conclusion of the school day the pupils immediately leave school for home. The lunch hour is of a short duration and often staggered allowing an insufficient amount of time to set up a good organized intramural program.

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24. Jones, *op. cit.*, p. 47.
25. La Porte, *op. cit.*, p. 48.
26. Rankin, *op. cit.*, p. 75.
27. Elmer D. Mitchell, *Intramural Sports,* (New York: A. S. Barnes and Company, 1939), p. 15.
28. Charles E. Forsythe, *The Administration of High School Athletics,* (New York: Prentice-Hall, Inc., 1948), p. 353.
29. La Porte, *op. cit.*, p. 59.
30. Jones, *op. cit.*, pp. 130-132.
31. Wyatt, *op. cit.*, p. 61.

According to the standards outlined by La Porte[32] in *The Physical Education Curriculum,* a detailed yearly program (course of study including special objectives) for each grade level should be on file in the principal's office and activity schedules should be posted on gymnasium bulletin boards. Sharman states, "Past experience has indicated that better teaching takes place and more worthwhile results are secured when teachers have a well constructed course of study to guide them."[33] It was revealed through this survey that sixty-seven schools failed to meet these requirements; seventeen schools had a *fair* course of study; fourteen schools had *good* courses of study, and only two schools had *excellent* courses of study. Rankin[34] states that only one school of sixty-six that he surveyed had a detailed course of study which included specific objectives.

The 100 schools of Kentucky received an average score of .51 as compared to .50 the average score received by the schools of six cooperating states. This is a very poor average and steps must be taken to rectify this situation. Such an obvious weakness is perhaps due to the failure of the state educational leaders to compile and publish a state course of study which would establish a minimum standard program for the schools to follow.

Another item on which the 100 schools failed to make a satisfactory average score was that establishing a course of study committee (men and women) to give consideration, at least annually, to needed revisions in the program. Williams and Brownell feel, "that there should be regular meetings of the committees, and also called meetings as needs arise."[35]

Eighty-one schools did not establish such committees; nine schools established committees but the committees *were not very active;* nine other schools established committees and they had *active* meetings; only one school was found that established a committee of men and women who were *very active in planning* needed revisions in their program. Failure to establish such committees to seek needed revisions in the program of activities appears to be the fault of the school administrators who evidently do not take an active interest in the physical education program.

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32. La Porte, *op. cit.,* pp. 33-40.
33. Jackson R. Sharman, *Introduction to Physical Education,* (New York: A. S. Barnes and Company, 1934), p. 135.
34. Rankin, *op. cit.,* p. 74.
35. J. E. Williams and C. L. Brownell, *The Administration of Health and Physical Education,* (Philadelphia: W. B. Saunders Co., 1951), p. 87.

The 100 selected schools showed a marked improvement on the item for maintaining a modern health instruction program under expert leadership in physical education, home economics, general science, or the correlation of the health instruction program through several departments. An average score of 1.70 was achieved by the 100 Kentucky secondary schools in comparison with the average score of .85 received by the schools of six cooperating states for this item. This definitely can be attributed to the health code enacted by the State of Kentucky requiring the teaching of health in the schools and the active program conducted for the implementation of the code.

With the improvement of health instruction there is also an improvement in the safety education program in the schools of Kentucky. The average score received by the 100 selected schools for this item was 1.10 in comparison to .71 received by six cooperating states. Only eighteen schools failed to have some definite organization for teaching safety education; sixty-four schools maintained a *fair* program for safety education according to the standards of La Porte;[36] eight schools had *good* programs; and ten schools received *excellent* ratings for their safety education programs.

Today one of the most important problems facing society according to Florio[37] is the urgent need for reducing the loss of life and property caused by accidents on the highways. He further states, "Statistics released by the National Safety Council reveal that drivers sixteen years of age constitute an accident hazard nine times greater than drivers forty-five to fifty years of age.[38] To reduce these accidents to a minimum many educators, such as Stack[39] Nixon and Cozens,[40] state that the responsibility of public schools is to offer driver education to those girls and boys who are approaching the legal driving age. Stack further declares, "There is also evidence that school trained drivers have a significantly better accident record than the untrained."[41] The State of Kentucky realizes the importance of driver education and in this connection sponsors a state-wide

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36. La Porte, *op. cit.*, p. 63.
37. A. E. Florio, "Driver Education in the Teacher-Education Curriculum," Journal of Health, Physical Education and Recreation, Vol. 19, January, 1948, No. 1, p. 13.
38. *Ibid.*, p. 13.
39. Herbert J. Stack, "Progress in Safety Education," *Journal American Association Health, Physical Education and Recreation,* Vol. 20, No. 9, November, 1949, p. 579.
40. Eugene W. Nixon and Frederick W. Cozens, *An Introduction to Physical Education,* (Philadelphia: W. B. Saunders Co., 1952), p. 208.
41. Stack, *op. cit.*, p. 579.

drivers' contest in the secondary schools for boys and girls who have reached the legal drivers' age.

Eleven schools of the 100 surveyed included driver training as part of their safety education program besides emphasizing safety habits and practices, safety codes, and safety standards in all departments.

In the mining communities safety education programs are emphasized to the highest degree. So many students enter mine work upon leaving school that safety education is stressed continually from the time a person arises until the time he retires. The mining communities attained excellent ratings for their safety education programs.

Williams and Brownell state, "There is no better way to arouse an abiding interest in, and support for, the program of health education and physical education than to encourage faculty recreation."[42] It was revealed through this survey that there are no definite efforts being made to encourage faculty recreation in Kentucky's secondary schools. This item received an overall average of .59 for the 100 secondary schools compared to .36 average compiled by the schools of six cooperating states. Fifty-two schools made no definite effort to encourage faculty recreation; thirty-seven schools achieved *fair* results; while eleven schools received *good* results in the encouragement of faculty recreation.

Faculty socials seemed one of the best means of conducting faculty recreation in the schools; while some schools, besides holding socials, conducted square dances and picnics for faculty recreation.

The problem of distance seems to be the main reason for the lack of faculty recreation. Like the pupils, the teachers must travel great distances in order to reach the school. This factor of distance seemed to discourage faculty recreation in the schools of Kentucky.

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42. Williams and Brownell, *op. cit.*, p. 58.

CHAPTER IV

AN EVALUATION OF OUTDOOR AND INDOOR AREAS IN 100 KENTUCKY SECONDARY SCHOOLS

The modern physical education program emphasizing sports requires extensive indoor and outdoor play areas. It is the purpose of this chapter to make an analysis of the indoor and outdoor play areas of the 100 selected Kentucky secondary schools.

Area—Outdoor: The facilities necessary to conduct a good outdoor program for health and physical education are covered in this area and include such items as the following: (1) total available unobstructed field and court areas, (2) sufficient fields marked off and equipped for various team activities, (3) sufficient fields marked off and equipped for various individual activities, (4) materials used to surface court or field areas, (5) type of protective materials used for jumping pits, (6) condition of the play areas, (7) maintenance work on the fields, (8) erection of fences for safety and control of play areas, (9) landscaping features of play areas, and (10) type of lighting used for play areas.

The average area score of the outdoor area attained by the 100 selected Kentucky secondary schools was found to be .86 as compared to 1.00 received by the combined area scores of six cooperating states.

Analysis of Specific Items of the Outdoor Area: It is recommended by the Committee on Curriculum Research of the College Physical Education Association[43] that the play area for a school should vary from four to fifteen or more acres, according to the size of the school. Williams and Brownell[44] suggest that the size of the outdoor play areas should be ten acres plus one acre for each 200 students in attendance, while Sharman[45] also recommends a minimum of ten acres for high schools. If this is the case, the schools of Kentucky fall far below the norms that have been suggested. The average outdoor play area space for the 100 selected schools is a little over two acres per school.

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43. La Porte, *op. cit.*, p. 73.
44. Williams and Brownell, *op. cit.*, p. 308.
45. Sharman, *op. cit.*, p. 147-148.

Thirty-nine schools failed to have the required minimum of four acres and received a zero for this item; twenty-nine schools had the minimum of four acres; eleven schools had a minimum of six acres and one additional acre for each additional unit of 400 students; twenty-one schools had the minimum of eight acres and one additional acre for each additional unit of 300 students.

There is a definite need for more play area space for the schools in Kentucky. Some of the schools surveyed were found to have less than two-thirds of an acre for play area. Jones[46] found that the average size of the outdoor play area of ninety-one schools out of 125 was 3.39 acres. Wyatt[47] in his survey found that the average outdoor play area for eighty-nine schools out of 405 was one acre or less. Rankin[48] states that he found the average outdoor play area size for fifty-five out of sixty-six schools was two acres. The author recommends that future school buildings be erected close to public parks. This procedure will provide the schools with sufficient areas to conduct the outdoor activities.

The item covering the total area of outdoor play space received an average of 1.14 for the 100 selected Kentucky schools in comparison with 1.88 average score of the schools of six cooperating states.

Sufficient playing fields, marked off and equipped for multiple use in field hockey, field ball, soccer, football, speedball, and touch football, in order to accommodate all outside peak load classes, (both boys and girls) were not in evidence at the 100 selected schools. This statement is borne out by the following scores: forty-four schools received a score of zero; forty-two schools received a score of one; twelve schools received a score of two; and only two schools received a score of three. The average item score received by the 100 selected schools was .72 compared with 1.02 average score for the schools of six cooperating states.

Outside court areas, marked off and equipped for multiple use in archery, badminton, handball, horseshoes, paddle tennis, and tennis, were also found wanting in the schools surveyed. Sixty-one schools had no outside court area facilities; thirty-two schools had *fair* outdoor facilities; six schools had *good* facilities, while only one school,

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46. Jones, *op. cit.*, p. 153-154.
47. Wyatt, *op. cit.*, p. 39.
48. Rankin, *op. cit.*, p. 47.

Eastern High School, Middletown, Kentucky, received an *excellent* rating.

Once again the 100 selected schools ranked low, as the average score attained by these schools was found to be .44 compared to .65 average score for the schools of six cooperating states.

The standards suggested by La Porte,[49] Williams and Brownell,[50] Rankin,[51] and Forsythe[52] for the types of material with which the outdoor courts and fields should be surfaced were not met by the majority of the schools in this survey.

Field and court areas should be surfaced with materials that are resilient, non-slippery, firm, as nearly dustless as possible, and should have suitable slope for good drainage in rainy weather. At least 20 per cent of the area should be paved for multiple court game use. Twenty-one schools had *very poor* areas and failed to meet the minimum requirements; seventy-two schools had *fair* surfaced play areas; eight schools used *good* materials to surface their court areas, while nine schools met all the requirements for *excellent* court areas, i.e., good turf, plus some dirt area, plus 20 per cent blacktop.

It was found that the overall average scores attained by the 100 selected Kentucky schools were below those of the six cooperating states. The schools of Kentucky received an average score of .79 in comparison to the average score of 1.56 for the six cooperating states.

The materials recommended by La Porte,[53] Bresnahan and Tuttle,[54] and Forsythe,[55] best for the covering of jumping pits and field apparatus are sawdust, sand, shavings, or dirt kept soft. It was noted in this survey that sixty-seven schools had no jumping pits; six schools used dirt kept soft, as a means of protection; three schools used sand; and twenty-four schools used sawdust as a protective material.

The field, court, and diamond areas of twenty-three schools were found not in the best condition, were not well-marked, had hazardous obstructions, and were not laid out to provide maximum relief from sun glare. The fields of twenty-eight schools were in *fair* condition; forty-five fields were found in *good* condition, while only four fields were found in *excellent* condition.

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51. Rankin, *op. cit.*, p. 44.
52. Forsythe, *op. cit.*, p. 329-340.
53. La Porte, *op. cit.*, p. 67.
54. George T. Bresnahan and W. W. Tuttle, *Track and Field Athletics*, (St. Louis: The C. V. Mosby Company, 1947), pp. 469-471.
55. Forsythe, *op. cit.*, pp. 334-335.

It was found that the maintenance work on the fields and courts in thirty schools was furnished by the physical education instructor and his students; in fifty-six schools the maintenance work was *partly* done by workmen and the physical education instructor; in five schools the work was *mostly* carried out by workmen with some aid from the instructor; in nine schools the maintenance work was done *entirely* by workmen without any assistance from the instructor. This latter policy seems to be the best method as it permits the instructor more time in planning and carrying out the objectives of his program.

The play areas of forty-two schools were found free of any fences, as suggested by Williams and Brownell,[56] that would aid in safety and control of the play areas. In twenty-three schools the play areas were *partly* fenced off from the streets; in twenty-seven schools the play areas were found *entirely* fenced off from the streets and in only eight schools were they found *entirely* fenced off from the streets with subdivisions where necessary, which further aided in the safety and control of the play area.

In addition to the fencing off of play areas Williams and Brownell[57] recommend that the play areas should be surrounded by attractive trees, shrubbery, and vines. This, it is believed, would make the play areas more attractive for play purposes. Fifty-four schools were found with *very poor* landscaping features; the surrounding areas of eighteen other schools were only in *fair* condition, and the areas of the other twenty-eight schools were found in *good* condition.

Play areas in three schools had a *fair* lighting system for night use for community recreation; twenty schools had a *good* lighting system according to the standards suggested by Forsythe[58] for community recreation at night. Sixty-seven schools had no lighting system whatsoever.

Area—Indoor Area: The facilities necessary to conduct a good program for health and physical education are covered in this area and include such items as the following: (1) adequacy of the gymnasium to handle the various types of activities, (2) standards as to painting, ceiling height, radiators, lines, in the gymnasium, (3) additional classrooms equipped for health instruction, (4) special rooms for coeducational social activities, (5) rest rooms for boys,

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56. Williams and Brownell, *op. cit.*, pp. 254, 332.
57. *Ibid.*, p. 333.
58. Forsythe, *op. cit.*, p. 340.

(6) rest rooms for girls, (7) faculty rest rooms, (8) equipment offices for girls and boys, (9) instructors' offices, and (10) adequacy of the combined facilities in case of inclement weather.

The average area score of the 100 selected schools for the indoor items was .81 compared to .90 for the schools of six cooperating states.

Analysis of Specific Items of the Indoor Area: Gymnasium areas should be sufficient for boys' and girls' inside class activities (for common use for apparatus, boxing, correctives, fencing, gymnastics, rhythms, tumbling, and wrestling) and should be appropriately equipped and properly heated, lighted, and ventilated as suggested by Williams and Brownell[59] and Rankin.[60] The gymnasiums of twenty-one schools did not meet these standards or specifications. Thirty-six schools *met a few* of the standards; in forty-two schools the standards were *approximately met* and only in one school were all the standards met.

A majority of the gymnasiums were erected by the Public Works Administration in 1936 and have served their usefulness. There is a need in many cases to build more modern gymnasiums to take care of the various activities that are now included in the modern program of activities. Five per cent of the schools visited had new gymnasiums, but they appeared to be erected for commercialization purposes; namely, in the pursuit of a basketball program. Rankin[61] also found in his survey of secondary schools that, in most cases, the gymnasiums were constructed and maintained primarily for interscholastic basketball.

It was revealed through this survey that over half of the schools surveyed had no additional classrooms, appropriately equipped for health education classes in the building. Forty-seven schools had one room appropriately equipped for health education classes, while only two schools had two or more rooms provided for health education classes. The remaining fifty-one schools used either the gymnasium or regular class rooms for classes in health education which were not appropriately equipped for these classes.

Although the 100 secondary schools received an average score of 1.00 for this item, compared to the average score .84 received by the schools of six cooperating states, conditions must still be improved.

59. Williams and Brownell, *op. cit.*, pp. 285-297.
60. Rankin, *op. cit.*, pp. 49-54.
61. *Ibid.*, p. 52.

If health education is to be taught properly the necessary rooms in which to hold these classes must be provided for and these rooms must be properly furnished if pupils are to gain the maximum benefits from the instruction.

Special rooms for coeducational social activities should be provided in the school; these rooms should also be appropriately furnished as suggested by Williams and Brownell[62] and La Porte.[63] Lee[64] suggests, if possible, a game room apart from the gymnasium should be provided for ping pong, shuffleboard, and recreational games. The schools of Kentucky have evidently forgotten to take this item into consideration at the time the buildings were in the blueprint stage. Seventy-three schools had no rooms provided in their plant for coed social activities. Seventeen schools used their gymnasiums, which were partly furnished; for coed social activities, and only ten schools had a completely furnished room for these activities.

Once again the fault seems to lie at the door of the persons responsible for erecting and constructing the school buildings. Williams and Brownell state:

> It is apparent that the construction and maintenance of school buildings involve both the canons of good architecture and the principles of modern education. The two are closely interwoven. Realization of this condition has been responsible largely for the rise of a group of architects especially trained in planning school buildings, and a consciousness on the part of superintendents that schools are to be erected and conducted in such a manner that the various attributes of education may be realized.[65]

This item received an average score of .43 for the 100 selected schools, while the schools of six cooperating states received an average score of .40.

Rest rooms for boys (equipped with cots, pads, blankets, and sheets) adequate to handle the peak load of use in case of injury, illness, or rest periods, were not in evidence in eight schools surveyed. In eight schools only one cot was provided for 100 boys; six schools provided one cot for seventy-five boys, and six schools provided one cot for fifty boys.

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62. Williams and Brownell, *op. cit.*, p. 295.
63. La Porte, *op. cit.*, p. 75.
64. Mabel Lee, *The Conduct of Physical Education,* (New York: A. S. Barnes and Company, 1937), p. 147.
65. Williams and Brownell, *op. cit.*, pp. 251-252.

Rest rooms appropriately equipped for girls were also found wanting, as seventy-eight schools failed to provide even one cot. Williams and Brownell[66] suggest one cot for every 200 pupils in attendance, while Lee[67] recommends one cot to each ten girls or fifty boys taking physical education at any one period. In six Kentucky secondary schools one cot was provided for the peak load of fifty girls; ten schools provided one cot for thirty girls, while six schools provided one cot for twenty girls.

Sixty-eight schools failed to furnish rest rooms, provided with appropriate dressing rooms and showers for faculty members. Twenty-one schools provided faculty rest rooms for women members only, while eleven schools provided faculty rest rooms for both sexes.

La Porte[68] suggests that the girls' and boys' locker rooms should be provided with an equipment room which should be properly arranged for issuing towels, suits, and supplies for both indoor and outdoor use. Sixty-one schools did not provide such an arrangement; thirty-eight schools made such provisions available only for the boys and but one school was found that provided equipment rooms for both girls and boys.

The instructors' offices were found to be on the same low par as the equipment offices. "There should be," according to Lee, "office space for all instructors with opportunities to change into gymnastic costume in private. There should be at least one shower for the private use of faculty members. The office of one of the staff should be near the main exercise room and dressing room.[69] Williams and Brownell[70] suggest that many administrators recommend the placing of offices between the gymnasium and locker room to facilitate administrative control and effective supervision of these areas.

The combined inside facilities (including classrooms, gymnasiums, and special rooms) of thirty-four schools were found inadequate to handle all classes (obys and girls) inside, during inclement weather. The inside facilities of fifty-eight schools were found *approximately* adequate and the combined inside facilities of eight schools could entirely handle all classes during inclement weather.

66. *Ibid.*, p. 150.
67. Lee, *op. cit.*, p. 193.
68. La Porte, *op. cit.*, p. 78.
69. Lee, *op. cit.*, p. 147.
70. Williams and Brownell, *op. cit.*, p. 295.

CHAPTER V

AN EVALUATION OF SPECIFIC FACILITIES IN 100 KENTUCKY SECONDARY SCHOOLS

The previous discussion concerned itself with an analysis of the outdoor and indoor areas of the 100 Kentucky secondary schools. The following discussion will concern itself primarily with specific facilities utilized in the indoor and outdoor areas. The specific facilities to be analyzed in this chapter are locker and shower areas, swimming pools, supplies and equipment.

Area—Locker and Shower: All the items under this area are directed towards maintaining a good, clean, healthy, atmosphere in the locker and shower areas. Under this area the following standards are established by the American Association for Health, Physical Education and Recreation,[71] and the Committee on Curriculum Research of the College Physical Education Association;[72] (1) the amount of floor space per pupil, (2) types of lockers, (3) types of locks used, (4) supervision of the locker rooms, (5) floor space per shower head, (6) controlling water temperature of showers, (7) adequate toilet facilities and (8) health habits of locker and shower areas.

The average score of the 100 schools in this area was .86 compared to the average score of 1.06 compiled by the schools of six cooperating states.

Analysis of Specific Items for Locker and Shower Areas: Locker rooms should be constructed to provide free floor space, exclusive of lockers, adequate to care for the peak load of use. Rankin states, "A standard generally accepted is that the size of the locker room should be eight square feet of floor space per pupil at the peak load, exclusive of lockers."[73] With this figure in mind, the survey revealed that the locker rooms of fifty-four selected schools were inadequate to handle their largest activity class. Twenty-eight schools

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71. American Association for Health, Physical Education, and Recreation, A Department of the National Education Association, *Adequate Standards for a Public School Health and Physical Education Program.* Leaflet, 1202 Sixteenth St. N. W., Washington, D. C., April, 1946.
72. La Porte, *op. cit.*, pp. 44-45.
73. Rankin, *op. cit.*, p. 79.

provided the minimum of eight square feet of floor space per pupil; twelve schools provided ten square feet per pupil, while six schools provided a free floor space of twelve square feet per pupil.

This item received a score of .70 for the 100 selected schools in comparison with the 1.32 average score received by the schools of six cooperating states.

Lack of foresight on the part of community educational leaders in planning the school plant is apparently the reason for this inadequacy of space in the locker room. Locker rooms, it seems, were primarily constructed to meet the needs of basketball teams and not physical education classes.

Individual locker facilities should be provided for all students and it is recommended by Lee[74] that either the half-length locker, standard size lockers, or self-service basket system, combined with full length dressing lockers, be provided. Individual lockers were provided by seven schools; nine schools provided combination box and dressing lockers; eight schools provided box lockers or narrow vertical lockers, while seventy-six schools failed to furnish lockers for all students taking part in activity classes.

For the protection of pupils' clothing the lockers of students participating in physical education classes should be equipped with a lock that meets the following requirements:

1. It actually protects what it locks up: it is safe from lock pickers and substitute keys.
2. It has a locking device that will work in spite of hard wear and careless use.
3. It involves the least possible work in the office to keep a record of locks and instruction for their use.
4. It permits the department to have ready access to any locker at any time.[75]

Lee[76] and Williams and Brownell[77] are in agreement that the most satisfactory system is that of the master-key combination system.

Lee advances these arguments in favor of the master-key combination system as she feels it fulfills the above requirements.

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74. Lee, *op. cit.*, pp. 139-140.
75. *Ibid.*, p. 181.
76. *Ibid.*, p. 182.
77. Williams and Brownell, *op. cit.*, p. 304.

1. The padlocks can be removed to other lockers in subsequent terms, thus changing the locking device on all lockers.
2. The padlocks can be transferred from a permanent to a temporary storage place while the student is in class, thus serving a double duty.
3. With a combination lock the student has no key to lose and the department has no keys to bother with, substituting for key cases a combination master chart.
4. With a master-keyed combination lock, the attendant can open all locks with one key, thus not needing to use the combination of each lock when necessary to open.[78]

The author found that seven schools provided *key locks* for the lockers; sixteen schools provided *permanent combination locks* and three schools provided a *high grade combination lock.*

One administrative responsibility, which is frequently overlooked, is adequate supervision of locker rooms. According to Williams and Brownell[79] no program of physical education is satisfactory which fails to provide this service. The following types of supervision may be utilized: (1) the paid attendant, (2) an assigned teacher, (3) student monitors, or (4) a bath attendant.

No evidence was found in sixty-four schools to show that continuous supervision, either by equipment clerks or instructors was provided for locker rooms while in use by students. Sixteen schools provided a *fair* supervision; eighteen schools provided *good* supervision, and only two schools provided *excellent* supervision.

It is recommended by the Committee on Curriculum Research of the College Physical Education Association[80] that shower rooms should provide eight to twelve square feet of floor space per shower head and sufficient showers to take care of the peak load adequately. Williams and Brownell[81] suggest a figure from twelve to fourteen square feet per shower head. Lee[82] states that no school should attempt to carry on physical education for girls unless there are at least four shower heads and that when individual shower heads are used, there should be one for each two-fifths of the peak load.

Forty-three schools which failed to follow the recommendation

78. Lee, *op. cit.*, p. 182.
79. Williams and Brownell, *op. cit.*, p. 306.
80. La Porte, *op. cit.*, p. 45.
81. Williams and Brownell, *op. cit.*, p. 311.
82. Lee, *op. cit.*, p. 145.

of from eight to twelve square feet per shower head were found. Thirty-eight schools provided one shower head for five students at the peak load; twelve schools provided one shower head for four students; while seven schools provided one shower head for three students at the peak load.

For the item, "Hot water is thermostatically controlled to prevent scalding; shower heads are at neck height; liquid soap dispensers are provided in all shower areas,"[83] it was found that forty-five schools failed to conform to these standards as outlined in *The Physical Education Curriculum* by La Porte. Fifty-four schools met the *approximate* standards, and only one school fully met these standards.

The locker room floors of fifty-one schools were neither washed daily with an antiseptic solution nor were antiseptic foot baths provided for optional use to aid in the control of foot ringworm as suggested by La Porte,[84] Lee,[85] and Williams and Brownell.[86] Forty-one schools met the *approximate* standards, while only ten schools met the *entire* standards.

Area—Swimming Pool: Under this area such items as size of a pool, construction of the pool, safety devices of the pool, sanitary conditions for swimmers, distribution of facilities, life guards, and pool use for community recreation are taken into consideration.

Analysis of Specific Items in the Swimming Area: According to Williams and Brownell[87] there are an increasing number of elementary and secondary schools which now provide swimming pools. This situation is not the case, however, in the State of Kentucky, as not one pool was reported of the 100 school surveyed; in fact, there are no pools in the 553 secondary schools in this state. The items, therefore, under the swimming pool area received a very poor score.

Schools without campus pools or adjacent facilities could score a maximum of fifteen points as outlined in *The Physical Education Curriculum*[88] under the swimming area if they conducted and stressed swimming campaigns. Points are awarded on the basis of the number

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83. La Porte, *op. cit.*, p. 77.
84. *Ibid.*, p. 45.
85. Lee, *op. cit.*, p. 144.
86. Williams and Brownell, *op. cit.*, p. 313.
87. *Ibid.*, p. 315.
88. La Porte, *op. cit.*, p. 79.

of students that take part in "learn to swim campaigns." Five points are awarded to a school if the "learn to swim campaign" successfully reached twenty-five per cent of the student body; ten points are awarded if the campaign reached fifty per cent of the student body, and fifteen points are awarded if the swimming campaign reached seventy-five per cent of the student body. Twenty-three schools fell into the twenty-five per cent group; one school fell into the fifty per cent group, and no schools were included in the seventy-five per cent group.

Several schools included in this survey received very good scores for the swimming items, as they used the swimming pool of the University of Kentucky, the pool facilities of which are excellent according to the standards established for swimming pools by Lee[89] and Williams and Brownell.[90]

Although there is a definite lack of swimming pools in the State of Kentucky, swimming is still practiced as a varsity sport in various schools. Schools that do have swimming teams use institutional and community pools for practice sessions and varsity meets. A state championship swimming meet is held annually in the State of Kentucky.

Economic reasons have been responsible for the non-existence of swimming pools in the secondary schools of Kentucky. The educational leaders of this state are aware of the numerous benefits that may be derived through swimming as enumerated by Williams and Brownell[91] but are powerless to offer an aquatic program in the schools until economic conditions improve.

Area—Supplies and Equipment: Supplies and the care and condition of these supplies are the main points taken into consideration in this area. The following items are included under this headings: (1) adequate supply of equipment for team sports, (2) supplies for individual or dual sports, (3) condition of supplies, (4) uniforms for activity classes, (5) furnishing of towels and suits, (6) laundry of equipment, (7) first aid supplies, (8) equipment clerks, (9) equipment for rhythm classes, and (10) availability of equipment for community recreation.

In this area the 100 selected schools showed somewhat of an

89. Lee, *op. cit.*, pp. 148-151.
90. Williams and Brownell, *op. cit.*, pp. 315-328.
91. *Ibid.*, p. 315.

improvement in comparison with the five areas previously analyzed. The average score received by the 100 selected schools was 1.22 compared to the average score of 1.13 received by the schools of six cooperating states.

Analysis of Specific Items of Supplies and Equipment: An adequate supply of balls and similar equipment was found available for class instruction in all team activities that were offered. Seven schools had less than one ball or other items for every ten members of the average size class, the established minimum suggested by the Committee on Curriculum of the College Physical Education Association;[92] thirteen schools had one ball for every ten members of the average size class; fifty-five schools had one ball for every eight members, and twenty-five schools had one ball or item for every six members.

It was found that forty-two schools failed to have class sets of supplies for individual and team sports. Fifty-six schools had individual supplies for each member of the average size class, and two schools had individual supplies for each member of the peak load class.

A majority of the schools had good supplies, but no instruction was provided. As mentioned before, basketball was overemphasized and, therefore, little time was devoted to instruction in other activities.

All class supplies were found in repair and in good condition, with the balls clean and well inflated and bats taped, both for efficiency and safety.

The appropriate type of uniform suggested by Williams and Brownell[93] was not evident in forty-six schools. In fifty-three schools the uniform was furnished by the student, and in only one school was the uniform furnished by the school without a charge.

As long as students wore gym shoes, they could take part in activity classes. The conventional type of gym shorts and T-shirts were not required. Many students wore blue denims or their regular street clothes for activity classes.

Lee states, "It is important that towels and laundry service be supplied by the school so that each student may have a clean

92. La Porte, *op. cit.*, pp. 47, 79.
93. Williams and Brownell, *op. cit.*, p. 305.

towel at the close of each physical activity hour."[94] Williams and Brownell state: "All things considered, the type of laundry service depends upon the size of the community and the use made of departmental facilities."[95]

Towels and swimming suits, where needed, were not made available in thirty-two schools. In sixty schools these items were furnished by the student; in one school the items were provided by the school with a fee being charged for the service, and in seven schools towels were furnished by the schools without a fee.

In thirty-six schools it was revealed that swimming suits and towels were laundered daily; uniforms were not laundered weekly. The students in fifty-nine schools did their uniform laundering at home; the uniforms and towels were laundered by one school which charged a fee, while four schools did the laundering without a service charge.

Wyatt notes in his survey that, "out of 163 schools reporting physical education programs 90 schools, or 55.2 per cent, require uniforms; 93 schools, or 57.2 per cent, required students to take showers after physical education classes, and 54 schools, or 33.1 per cent, furnished towels and soap."[96]

Adequate first-aid supplies, as suggested by Lee[97] and Hackensmith,[98] were not found available at all times either in a first-aid room, instructor's office or equipment office. Ten schools had *fair* first-aid supplies, according to the materials recommended in the Code for School Sanitation Survey;[99] eighty-three schools had *good* supplies, and only one school had *excellent* first-aid supplies.

The average item score for the first-aid supplies item for the selected schools of Kentucky was 1.79 compared to 1.60 average item score received by the schools of six cooperating states.

In seventy schools equipment clerks were not provided (other than instructors) for all activity hours to handle equipment and supplies. Thirty schools provided volunteer student help to act in the dispensing of equipment and supplies without giving students physical education credit for this help. The best policy, apparently

94. Lee, *op. cit.*, p. 183.
95. Williams and Brownell, *op. cit.*, p. 306.
96. Wyatt, *op. cit.*, p. 78.
97. Lee, *op. cit.*, p. 194.
98. Hackensmith, *op. cit.*, p. 173.
99. *Ibid.*, p. 173.

is to employ paid attendants to issue the equipment, freeing the instructor from this duty and allowing the instructor more time to devote to the program .

Good equipment in the form of pianos and other necessary musical accompaniment were noted in the survey of the 100 selected schools. Although the schools possessed good musical equipment, few schools took advantage of this equipment to conduct rhythm and dancing classes.

It is felt by La Porte[100] that the activity supplies of a school should be made available for community recreation outside of regular school hours. Through the use of these supplies better use of leisure time will be made possible.

The activity supplies of fifty-two schools were not made available for community recreation use outside of school hours. Forty-eight schools did make their supplies available.

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100. La Porte, *op. cit.*, p. 80.

CHAPTER VI

AN EVALUATION OF THE HEALTH PROGRAMS IN 100 KENTUCKY SECONDARY SCHOOLS

An important part of the educational program of any school is the medical examination and the health service that is provided for the pupils. The physical education department must rely on the findings of the medical examination for the proper classification of students for class instruction and competitive participation.

Area—Medical: All the items included in this area are directed toward providing the desirable healthful aspects in a physical education program, therefore making it possible for all students to take some active part in the program. The following points are healthful aspects that physical education departments should incorporate in their programs: (1) type of medical service, (2) school nurse, (3) comprehensive health examination, (4) participation in strenuous class activity, (5) progressive health record, (6) classification of students, (7) assignment to rest or restrictive activity, (8) resumption of normal activity after illness, (9) teacher's health examination and (10) cooperation between the physical education teacher and the school physician.

The average medical area score received by the 100 selected Kentucky secondary schools was 1.50 in comparison to 1.00 the average score received by the schools of six cooperating states. This area score attained by the schools of Kentucky was the highest area score received under any of the ten major areas.

Analysis of Specific Items in the Medical Area: "The problem of securing medical examiners is difficult. If possible, a part-time physician should be employed for each school. Larger systems have physicians visiting on a part-time basis from one school to another."[101] Points were awarded for this item of physician service on the type of service that was utilized. If a school had adequate volunteer service by community physicians two points were awarded to the school. Three points were awarded if a school had a part-time paid physician, or in schools of 2,000 or more if there were one or

101. La Porte, *op. cit.*, p. 50.

more full-time physicians. For this item it was noted that thirty schools did not have adequate volunteer service by community physicians and were awarded a zero; sixty-four schools had adequate volunteer service by community physicians and were awarded two points, and only six schools had either a part-time or full-time physician and were awarded the maximum three points. The thirty schools that did not have adequate volunteer services by community physicians did have access to the services of a city or county health department where the services were not always found adequate.

Wyatt found in his survey that, "the service of a city or county health department are available to nearly all of the high schools. Only 25 out of 353—or 7 per cent indicated they do not have access to the available services of a county or city health department."[102]

Hackensmith[103] reveals that in his survey approximately 226 schools had the full-time or part-time services of a county health doctor and that the doctors were on a regular salary basis paid through the budgets of the Kentucky State Board of Health. He also found that a majority of the county and independent school boards contributed to the county board of health to insure health services to the schools. Six schools in his survey had a full-time physician and thirty-two schools had a physician on a part-time basis. Thirty-one schools had physicians on call who were available only for emergencies.

It was noted that the 100 selected Kentucky secondary schools for this item practically doubled the average item score received by the schools of six cooperating states. The average item score received by the schools of Kentucky was 1.59 compared to .86 average score received by the schools of six cooperating states. This high score can definitely be traced to the enactment of the Code for Health and Physical Education (SBE 53-2) which has improved the health and physical education programs in both the elementary and secondary schools of Kentucky.

"The school nurse," states Williams and Brownell, "is such a valuable member of the school staff that even before the health education movement spread widely through the schools, the nurse in many communities had established herself as an indispensable educational worker."[104] It is a desirable standard for each school to main-

102. Wyatt, *op. cit.*, p. 82.
103. Hackensmith, *op. cit.*, pp. 331-332.
104. Williams and Brownell, *op. cit.*, p. 144.

tain a full-time nurse. If this is impossible, a part-time nurse should be made available to several schools. La Porte[105] suggests that a trained school nurse should be provided for both a school and home visitation purposes, either a part-time or full-time nurse, according to the size of the school.

If a school employed a part-time or full-time nurse, the type of service that was rendered was graded. For *fair* service, one point was awarded; for *good* service two points were awarded and if *excellent* service was provided by the nurse, the maximum of three points were awarded. In thirty-nine schools no nurse service was provided; fourteen schools had nurses that provided *fair* service; forty-four schools provided *good* nursing service, and only three schools had *excellent* nurse service.

Once again the surveyed schools of Kentucky outscored the six cooperating states, but this time only a slight difference was noted. The Kentucky surveyed schools had a 1.11 item average score compared to .94 item average score received by the schools of six cooperating states.

A comprehensive examination by the school physician, with the assistance of the physical education instructors, should be required of every student at least once in each school level. The examination should include at least a careful check for orthopedic and postural defects, vision, hearing, nose, mouth, throat, teeth, heart, lungs nutrition, skin, nervous condition, and possible hernia.

The physical education department is dependent upon the health departments' examination as it will determine the following.

1. Those who may safely venture into any form of activity.
2. Those who may attempt an average routine.
3. Those who must be watched and checked as they become too enthusiastic about activity.
4. Those who may exercise only mildly but who need body education.
5. Those who may exercise actively but who need correction measures for re-education of the body.
6. Those who must be safeguarded that they are practically on the invalid classification.[106]

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105. La Porte, *op. cit.*, p. 50.
106. Lee, *op. cit.*, p. 226.

Schools were graded on the frequency with which health examinations were conducted on each school level. Wyatt[107] found that the high schools in his survey were sadly lacking in health services for the students. Over 75 per cent of the surveyed schools did not give, or require the students to have, a physical examination at any time during their four years of high school enrollment.

Rankins'[108] survey reveals that only one school out of sixty-six surveyed, required the pupils to have a physical examination before being assigned to a physical education class.

According to Hackensmith[109] his survey uncovered the following statistics: (1) eighty schools provided a health examination once a year, (2) ten schools provided a health examination twice a year, (3) three schools provided a health examination every two years, (4) three schools provided a health examination every three years and (5) fifty-two schools provided a health examination for the athletes only.

The author found that forty schools did not conduct a health examination on the high school level; fifty-seven schools provided one health examination on each school level, and only three schools provided a health examination, two or more times, on each school level.

Many of the health examinations that are given in the secondary schools of Kentucky were found inadequate. A majority of the schools examined only the eyes, ears, nose, throats, and hearts of its pupils. These examinations are vitally important and in the future must be more complete, more so than they have been conducted in the past, in order that the physical defects may be uncovered earlier and correction started immediately.

This average item score received by the secondary schools of Kentucky practically doubled the average item score of the six cooperating states. The average item score in Kentucky secondary schools for the frequency of the health examination was 1.20 compared to the average item score of .62 received by the schools of six cooperating states.

According to La Porte[110] no school should permit the pupils

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107. Wyatt, *op. cit.*, p. 17.
108. Rankin, *op. cit.*, p. 72.
109. Hackensmith, *op. cit.*, p. 334.
110. La Porte, *op. cit.*, pp. 48-49.

to participate in strenuous class or athletic activity without a satisfactory medical examination. It was noted that in only sixty-two was this suggestion followed.

It is also desirable for each school to maintain a permanent, continuous, progressive, health record for each student. This record should be passed on to each grade and be used as a basis for advice and follow-up health service. Lee[111] recommends a cumulative health record that covers the twelve grades, to be used for each student.

Schools could gain points for the type of health records that were maintained. The following results were obtained for this item: eighteen schools maintained no health records that would meet the minimum standards suggested by La Porte;[112] nine schools maintained *fair* records; forty-four schools maintained *good* records, and twenty-nine schools maintained *excellent* health records.

Hackensmith in his survey states:

> Each public school and teacher training institution is also required to start cumulative health records for each child or student entering school, effective at the opening of the 1948-49 school year. These records are to be maintained throughout the child's or student's attendance after which they will be filed as a part of the school's permanent record and will be available for transfer.[113]

Kentucky's surveyed schools received a 1.85 average score for this item compared to .55 average score received by the schools of six cooperating states.

On completion of the health examination Lee suggests that the students should be grouped according to the physician's findings into four groups for physical education. These four groups are as follows:

1. Those who may take any activity offered.
2. Those who may take any activity offered but with certain minor restrictions.
3. Those who may take only restrictive activity.
4. Those who may not even take restricted activity and therefore must be excused from all classes.[114]

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111. Lee, *op. cit.*, p. 227.
112. La Porte, *op. cit.*, p. 81.
113. Hackensmith, *op. cit.*, p. 88.
114. Lee, *op. cit.*, p. 237.

La Porte[115] recommends that on the basis of the medical examination children should be classified into three divisions: (1) average, normal for unlimited participation, (2) subnormal, with temporary or permanent limitation to restricted activity and (3) offered individual or corrective treatment, supplementing the normal program.

Following LaPorte's recommendation, the author found that sixty-eight schools used no system for classifying the students for physical education classes, according to the findings of the physician; twenty-five schools had a *fair* system of classification; seven schools had a *good* system of classification, and not one school was found that had an *excellent* system of classifying students for physical education classes.

Jones[116] found that practically no attempt is made in Kentucky high schools to examine scientifically and classify pupils for physical education. Eleven out of 125 principals reported they did so and 104 reported they did not.

Rankin[117] reports that not one of sixty-six schools surveyed having a physical education program used any system of classification of pupils other than by classes and study hall.

In this item the Kentucky schools received a very low average score of .39 compared to .22 average score for the schools of six cooperating states.

"One of the most persistent problems of administration," according to Williams and Brownell, "is the determination of a policy, with accompanying procedures, regulating excuses from physical education. Real cases of incapacity, such as diabetes or severe heart disease, present few difficulties. Complications arise when students, not handicapped in fact, bring notes from parents or family physicians requesting that the requirement be waived."[118]

Whenever it is necessary for a student to be assigned to rest, restricted or individual activity, or excused from required physical education activity (other than temporary) it should be approved by the school physician in consultation with the head of the physical education department.

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115. La Porte, *op. cit.*, p. 49.
116. Jones, *op. cit.*, p. 147.
117. Rankin, *op. cit.*, p. 73.
118. Williams and Brownell, *op. cit.*, pp. 97-98.

Williams and Brownell further state: "Since public education is a state function it may be assumed legally that the advice of the school physician takes a precedence over parents and family physicians in the matter of excuses."[119] A reduction in the number of excuses has been noted by many directors of health and physical education leaders, "when parents and family physicians understand clearly the function and organization of the programs."[120]

In sixty Kentucky schools it was revealed that approval for assignment to rest, restricted activity, or excuse from normal physical education was not approved by the school physician in consultation with the head of the physical education department; forty schools did have this consultation before excuses were approved. In the former case, (sixty schools) notes from home and family physicians were sufficient evidence for excuses from physical education classes.

It is a desirable standard for students returning to school after influenza or any other serious illness to be inspected by the school physician or nurse and to be assigned to a modified program until their condition justifies resumption of normal activity; and that students sent home in case of illness or accident be accompanied by an adult.

In fifty-six surveyed schools these standards were not met; forty schools met the *approximate* standards, and in only four schools were they *entirely* met.

Another desirable standard for the school to follow is that of making it mandatory for teachers to have a health examination conducted by the school physician followed by a periodic examination every three years thereafter and a careful inspection of all teachers returning to duty after an absence of two weeks or more because of illness.

Hackensmith states:

> The State Board of Education approved and adopted the rules and regulations submitted by the Superintendent of Public Instruction March 21, 1947 which require "medical examination of each teacher on employment and every year thereafter and of each child, in as far as local facilities and personnel are available, im-

119. *Ibid.*, p. 78.
120. *Ibid.*, p. 98.

mediately prior to entering or upon entering school for the first time at least every fourth year thereafter.[121]

Evidently the schools of Kentucky are following the regulations as it was noted that seventy-four schools met the *entire* standards suggested by La Porte;[122] twenty-three schools met the *approximate* standards, and only three schools failed to meet the *approximate standards.*

The Kentucky surveyed schools turned in their best score on this item. They attained the very commendable score of 2.63 as compared to 1.23 average item score of six cooperating states.

It is also desirable that non-medical teachers or school officers never be permitted to diagnose or treat health disorders, but there should be a close cooperation maintained between the physical education teachers and school physician.

In the past many non-medical teachers have been permitted to diagnose and treat health disorders with harmful results being noted. The schools of Kentucky are apparently discouraging this practice as evident from the scores attained from this item. It was found that the average score for this item was 2.30 compared to 2.23 average score of the schools of six cooperating states.

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121. Hackensmith, *op. cit.*, pp. 87-88.
122. La Porte, *op. cit.*, p. 81.

CHAPTER VII

AN EVALUATION OF THE MODIFIED PHYSICAL EDUCATION PROGRAMS IN 100 KENTUCKY SECONDARY SCHOOLS

The medical examination classifies pupils for physical education participation into three groups, (1) "A" group, (2) "B" group, and (3) "C" group. Group "A" pupils are normal and are permitted to participate in a regular physical education program of vigorous activity. The latter two groups are classified as restrictive and remedial pupils and are only permitted to participate in a modified physical education program to meet their individual needs. This chapter will be devoted to an evaluation of the modified physical education program conducted in the secondary schools of Kentucky.

Area — Modified — Individual Activities: The program of activities must be designed to meet the highest standards. The items under this area meet these high standards for the program of activities and though condensed are as follows: (1) classes with a limited enrollment must be provided for the "B" and "C" groups, (2) all modified and individual cases should be properly classified and grouped within classes, (3) extreme types of restricted cases are assigned to periodic rest periods, (4) adequate facilities should be provided for the handling of individual activity cases, (5) teachers who have been assigned to handle individual activity cases should have the necessary technical training, (6) in individual activity instruction emphasis is placed on practicing the directed exercises at home, and (7) normal pupils temporarily incapacitated for strenuous activity should be assigned to a modified program until the school physician or nurse approves their return to regular class work.

The average area score of the modified-individual program of activities attained by the 100 Kentucky secondary schools was .07 compared to .03 received by the combined area scores of six cooperating states.

Analysis of Specific Items in the Modified-Individual Activities: On the basis of the health examination La Porte[123] feels that the children should be classified as follows:

123. *Ibid.*, p. 49.

1. Group "A"—The average normal children without defects of such as to limit their participation. They would be classified as unlimited and might participate in any vigorous activity.
2. Group "B"—Those students having certain temporary or permanent conditions demanding limitation of activity, with no vigorous participation. They would be classified as restricted or modified cases.
3. Group "C"—Those students who have conditions seemingly susceptible of improvement in some degree, and would be classified as remediable cases.

Students classified in the "B" group should be encouraged to participate in those activities within the range of their capacity as indicated by the school physician. In some cases physicians may permit vigorous activity with certain limitations. Where vigorous activity is prohibited, milder forms of activity should be encouraged instead of excusing or permitting students to rest.

Students classified under the "C" group should be given the opportunity to correct the specific defects and at the same time be given the opportunity to develop skills in other activities for use in post-school life.

Corrective cases may be classified under the following groups:

1. nutrition (over and under weight)
2. poor posture
3. weak and flat feet
4. functional and organic heart condition
5. hernias
6. infantile paralysis, and other crippling conditions
7. neurasthenia or nervous instability
8. nenstrual and endocrine disorders.[124]

Adequate modified and individual activity classes, with limited enrollment, should be provided for those students incapacitated for normal participation or needing special postural or orthopedic correction. These classes, according to La Porte,[125] should be

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124. "A Program in Health, Physical Education and Recreation for the Schools of the Commonwealth of Kentucky," Suggested Standards for the Minimum Foundation Program Presented by the State Association for Health, Physical Education and Recreation. February, 1953, p. 26.

125. La Porte, *op. cit.*, p. 82.

limited to a maximum of thirty students per instructor with the ideal number of twenty students per instructor.

Williams and Brownell state the following in regard to the size of the class.

> Pupils assigned to individual correction assemble at stated periods, but there will be considerable latitude in the arrangements. Thus, the size of the class will vary according to the type of case and the ability of the instructor. The type of case is even more demanding of flexibility in the size of the class. Thus, a child with cerebral palsy will require the entire time of the instructor in any one period. On the other hand, the average instructor can manage four or five children with infantile paralysis, and a group of twenty with flat feet or muscular underdevelopment can be taught efficiently as a class. This gives no priority to type of case. All are important but it does not indicate how the type of case controls the size of the class.[126]

Stafford states the following on the size of the class:

> An ideal, but often impractical situation is one instructor teaching one student. This cannot be followed as routine procedure, but office conferences with individuals will often make it possible for a limited time. In a large corrective class there will be many students who need individual work. The larger the number in this unit the less time the instructor can give to each student. Ten students are all that one instructor can conveniently handle for individual corrective work.[127]

In Wyatt's[128] survey he reveals that only ten schools, or two per cent of the total schools, held corrective classes. Only one city school out of 154 had a class for physically handicapped pupils; four county schools out of 267 had such classes, and five private schools out of sixty-three provided special classes for those not able to participate.

Not one school out of sixty-six in Rankin's[129] study provided a modified or restrictive program of physical education designed to meet the individual needs of those pupils having limitation of activity; and no school provided a corrective program in physical education for individuals having defects where remediable.

In ninety-eight Kentucky secondary schools the author found

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126. Williams and Brownell, *op. cit.*, p. 161.
127. George T. Stafford, *Preventive and Corrective Physical Education*, (New York: A. S. Barnes and Company, 1934), p. 37-38.
128. Wyatt, *op. cit.*, p. 52.
129. Rankin, *op. cit.*, p. 123.

that no organized classes were provided for students needing corrective or remedial work; in one school it was found that one teacher conducted such a class with a maximum of thirty students, and in one other school this class was composed of twenty students per instructor.

All the items under this area received very poor scores. For this item the selected schools received an average item score of .04 in comparison to th score of .02 received by the schools of six cooperating states.

Pupils requiring modified or individual corrective work should be properly classified and grouped within classes for effective instruction and guidance according to their condition. When only one instructor is provided for these cases, as in the case of small schools, it may be necessary to group the pupils according to major needs where those with a given defect may be taught together. "Group exercises can be devised where classes of from twenty to twenty-five can be handled effectively. The squad method may be used, in which pupils with common defects assist one another under close supervision of the teacher. In some cases specific individual attention may have to be given to certain ones."[130]

Lee[131] suggests that special classes should be organized for the protection of those who are physically unable to engage in the usual routine of physical exercise and they would be given the form of physical education which they are fitted to do. She feels that "the physically incapacitated children must not be thrown into classes in physical education with normal children for psychological as well as for physiological."[132]

Extreme types of restricted cases will need specific rest periods with no activity. Some of these cases would include extreme malnutrition, potential tuberculosis, extreme or uncompensated heart lesions, and extreme fatigue nervousness. Students who have been absent because of a systemic illness should be approved by a physician before returning to strenuous activity. Often they should be assigned to restricted or even complete bed rest for a period of two to three weeks. Those who are in physical condition to attend school should be able to participate in some activity. Some of these activi-

130. "A Program in Health, Physical Education and Recreation for the Schools of the Commonwealth of Kentucky" *op. cit.*, p. 26.
131. Lee, *op. cit.*, p. 262.
132. *Ibid.*, p. 262.

ties in which they might participate are card and table games, dart games, modified bowling games, golf putting, archery, tether ball, quoits, shuffleboard, table tennis, and fly casting.

In regard to restricted activities Lee has this to say:

> The handicapped child needs information for protection; he also needs mechanical help and, beyond that, guidance into what ever field of recreation which falls within his capacities. Activities to draw from for restricted classes are: ten pins, basket goal, clock golf, golf croquet, hockey golf, tether ball, ping pong, shuffleboard, and quoits.[133]

Ninety-five Kentucky secondary schools did not assign extreme types of restricted cases to rest periods, in addition to the modified activity. Four schools did a *fair* job of assigning these cases to rest periods, and only one school did a *good* job of assigning the restricted cases to rest periods.

The individual activity classes should be supplied with adequate facilities either within a school or in a central corrective center, accessible to several schools.

In small schools it is often impossible to provide corrective facilities. When such conditions occur, La Porte suggests, "A substitute procedure should be adopted in which a centrally located well-equipped corrective center is provided either within a city for use by different schools or at some central point available to several school districts who jointly support it and have access to it."[134] Here the problem of transportation makes the possibility of such centers inadvisable and it is suggested by Keene[135] that a portable corrective plant be provided, being shifted periodically from one building to another. Portable automobile clinics have been used for diagnosis, clinical service, and corrective treatment.

Adequate facilities for handling individual activity cases were not available within ninety-eight schools nor in a central corrective center accessible to several schools. Only two schools were found which had *fair* facilities for handling individual activity cases.

The usual preparation of the physical education teacher is quite inadequate to conduct corrective and remedial classes. Teachers need special preparation to instruct these classes.

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133. *Ibid.*, p. 56.
134. La Porte, *op. cit.*, p. 57.
135. C. H. Keene, *Physical Welfare of the School Child*, (New York: Houghton, Mifflin Company, 1929), p. 89.

Stafford feels that the teacher of preventive, corrective, and remedial physical education in addition to his knowledge of games, etc.

> Must have a thorough knowledge of applied anatomy and physiology, abnormal phases of diet and nutrition, the metabolism of the body, kinesiology and hygiene (general, mental, and child hygiene). He must also have a more practical conception of the neuromuscular system and disturbances of organic balance. A basic course is psychology and practical experience in health education are invaluable.[136]

Apparently our teacher training schools have neglected the training of qualified teachers to handle individual corrective activity classes. Ninety-nine schools were found with physical education instructors who were not qualified and who did not have sufficient training in order to conduct these classes. One school was found to have an instructor who possessed *good* training to handle individual activity classes.

La Porte[137] recommends that in individual activity instruction, emphasis should be placed upon practicing the directed exercises at home, frequently with the cooperation of the home.

"Some exercises may be practiced at home," states Williams and Brownell, "but usually the task of supervision is quite beyond the ability of the parents."[138] They further state:

> The home must cooperate, but such aid is best given by parental supervision of hours of sleep, diet, rest, and other matters of practical hygiene that are clearly recognized by the child as within the scope of parental authority and responsibility.[139]

No evidence was found in ninety-four per cent of the schools to show that emphasis in individual activity was placed upon practicing the directed exercises at home. Five per cent of the schools placed *fair* emphasis and only one school was revealed that placed *good* emphasis upon this instruction.

Normal students who are temporarily incapacitated for strenuous activity exercises because of accident, operation, or serious illness should be, according to La Porte,[140] assigned to a modified

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136. Stafford, *op. cit.*, p. xvii.
137. La Porte, *op. cit.*, p. 82.
138. Williams and Brownell, *op. cit.*, p. 162.
139. *Ibid.*, p. 162.
140. La Porte, *op. cit.*, p. 83.

activity until the school physician or school nurse approves their return to class. Through a modified program of activity the pupils are then able to return to the regular physical education class and engage in strenuous activity. The above procedure, however, does not appear to be the practice in the schools of Kentucky, as ninety-five schools did not assign the temporarily incapacitated students to a modified activity until the school physician or nurse approved their return to regular class work; five schools did so.

The author found that no definite modified or individual corrective programs are being conducted in the secondary schools of Kentucky. Some schools reported they have makeshift programs; but when the programs were examined, they were found inadequate.

CHAPTER VIII

AN EVALUATION OF THE ORGANIZATION AND ADMINISTRATION OF PHYSICAL EDUCATION AND HEALTH CLASSES IN 100 KENTUCKY SECONDARY SCHOOLS

The success or failure of any physical education program will depend largely on how the program has been organized and administered. Successful physical education programs are never achieved through chance methods but only through careful planning and studying. Some of the important characteristics that go into the development of a successful physical education program that has been carefully organized and administered will be analyzed and discussed in this chapter.

Area—Organization and Administration of Class Programs: Better organization and administration of programs will be achieved by the schools if the following items under this area are taken into consideration and followed: (1) all persons coaching teams or handling physical education classes are properly certified to teach and have had extensive training or experience in physical education, (2) teachers are active in professional organizations, (3) instructors stress co-ordinated teaching, (4) frequent opportunities are provided for coeducational activity, (5) instructional classes for normal students are limited in size for effective instruction purposes, (6) teacher class assignments are limited for adequate instruction, (7) testing for the final grade in activity classes is distributed over certain points, (8) students are not permitted to substitute other activities in place of physical education, (9) health education is provided in regular instructional periods, and (10) assignment to activity classes is based on age, physical condition, skill development, need, and interest.

The secondary schools of Kentucky received the same area score under this area as they did for the medical area, that being 1.5. The schools of six cooperating states attained an average area score of 1.3.

Analysis of Specific Items in the Organization and Administration of Class Programs: It is important that all persons handling physical education programs be properly certified by the state.

Physical education is a very technical field and includes many activities which are more or less hazardous. Programs should be carried on only under the leadership of trained teachers who should have a minor, or, at least, preferably, a major in physical education.

The persons handling physical education programs in thirty-three schools were certified and had experience in physical education; in sixty-two schools the teachers were all certified, had experience, and had either a major or minor in physical education. In only five schools was it found that the teachers failed to conform to these standards.

Jones states in his survey, "The teachers of physical education in Kentucky are the most illogically trained group of teachers in any part of the local field."[141] This statement is based on the findings of his survey in which he reveals that in 125 schools surveyed there was a total of 150 teachers of physical education. Thirty-six teachers specified as being regular teachers in physical education had no professional training and fifty-five had less than ten semester hours in physical education. It was reported that there were eighty-six experienced teachers; of this number twenty-two were "first-year" teachers. One hundred and fourteen teachers had professional training.

Wyatt[142] found that three were 308 teachers of physical education in 163 schools. Of these 252 teachers were part-time teachers and fifty-six were full-time teachers; 156 of the 308 had majors or minors in the field.

Rankin's survey[143] reveals that there were thirty-one teachers employed to teach physical education in the twenty-four schools which had physical education programs. Twenty-four of the thirty-one teachers had college degrees, with either a major or minor in physical education.

For this item of teacher training the secondary schools of Kentucky received an average item score of 2.52 as did the schools of six cooperating states.

Teachers should be active in professional organizations, such as the American Association for Health, Physical Education, and Recreation, attend professional meetings, subscribe to professional maga-

141. Jones, *op. cit.*, p. 159.
142. Wyatt, *op. cit.*, p. 53.
143. Rankin, *op. cit.*, p. 77.

zines, and maintain a good supply of current professional books in their personal library. The physical education teacher is then better able to understand the problems which arise in the field and at the same time is kept up to date with the happenings and findings in physical education.

The instructor, while teaching the fundamentals of a particular skill, should also present the rules of the game and the team strategy as they effect successful play. Stress must also be placed on the principles of social conduct of the game, the relation of game situations to life situations, and safety features. If these are all intimately co-ordinated with the learning of skills, they will become an integral part of the game situation and will help to develop a broad understanding of the sports as well as better appreciation of individual and team responsibilities.

In forty-two schools it was found that the teachers did not stress co-ordinate teaching which combines with performance fundamentals, the necessary rules, team strategy, and social and ethical standards. In fifteen schools the co-ordinate teaching was only *fair;* in thirty-nine schools it was *good,* and in only four schools was it found that the co-ordinate teaching was *excellent.*

Frequent opportunity should be provided for coeducational activity either in class instruction or recreational activity. Since boys and girls and men and women must live and play together, it seems logical that they should be guided in the selection of activities and trained in participating in them together so that the maximum social values will be attained.

Lee, in regard to this, states:

> Children should be taught in early adolescence the amenities of play situations in mixed groups. This phase of their education has direct bearing on their guidance in the amenities of social intercourse. Through coeducational classes in physical education boys and girls should become accustomed to playing together correctly and without self consciousness in the presence of the opposite sex. With careful guidance the boys should become to know the courtesies due their girl opponents and their girl teammates; they should learn how to assist girls in game situations, keeping hands off according to the code of a gentleman. Such things are not considered merely old-fashioned by those who care about the fine points of fine living. Boys need to learn to tame their strength and to adapt it to the girls' lesser capacities for the sake of their mutual pleasure in playing together. Girls need to play with boys in order

> to gain from them a better and quicker understanding of sportsmanship than they get from playing only with each other. They can learn much from boys of the "give and take" spirit that is wholesome. They need to learn how to accept graciously from boys such attentions as are due them as girls but at the same time they also need to learn to assume their share of responsibilities of play situations; they must learn how to be real partners with boys—co-workers, equal in sharers in both victories and defeat.[144]

Apparently the schools of Kentucky are not aware of the social values that may be derived through coeducational activities, as it was noted in this survey that only fifty-four schools mildly encouraged these activities; eighteen schools had coeducational intramural sports; one school had, besides promoting coeducational activities, provided coeducational class instruction and twenty-seven schools did not encourage coeducational activity.

The physical education classes should be limited in size for effective instructional purposes. Activity classes should not exceed thirty-five students and in no case should organized classes go beyond forty-five students per instructor. Lee[145] feels that forty students should be the maximum size class if good work is to be expected. The maximum size class in the secondary school, approved by the American Association for Health, Physical Education, and Recreation, is one teacher per fifty pupils in general physical education activities, one teacher per thirty-five pupils in swimming, and one teacher per thirty-five pupils in health instruction.

Thirty schools in this survey exceeded the suggested maximum of forty-five students per instructor; seven schools had a maximum of forty-five students per instructor; sixteen schools had forty students per instructor, and seventeen schools had the optimum number of thirty-five students per instructor.

In this item of class size the secondary schools of Kentucky were outscored by the schools of six cooperating states. Kentucky schools received an average item score of 1.80 compared to the average item score of 2.23 received by the schools of six cooperating states.

La Porte[146] suggests that in order that a teacher may do efficient work the assignments for class instruction should not exceed five clock hours or the equivalent class periods per day. In no case should they be permitted to exceed six clock hours per day. This maximum

144. Lee, *op. cit.*, p. 127.
145. *Ibid.*, p. 284.
146. La Porte, *op. cit.*, p. 56.

should include after school responsibilities, such as team coaching, intramural sports, or any other extra-curricular activity.

The schools of Kentucky complied with the suggestion of La Porte's, as it was noted that in thirty-one schools the maximum load of the physical education teacher was six hours; in forty-six schools the maximum load of the physical education teachers was five hours. Only in twenty-three schools did the maximum load of class assignments, plus other activities, exceed the suggested maximum of six hours per day.

Here it was noted that the secondary schools of Kentucky doubled the average item score received by the schools of six cooperating states. Kentucky secondary schools received an average item score of 2.05 in comparison to the average item score of .95 received by the schools of six cooperating states.

Practically all authorities agree that physical education should be required of all students and credit for satisfactory work should be graded. The final grade in the activity class, it is suggested by La Porte,[147] should be distributed over (1) performance skills, (2) knowledge of rules and strategy, (3) social attitudes, and (4) posture and body mechanics.

It was revealed in Wyatt's[148] survey that seventy-seven out of a total of 484 schools made physical education a required subject. Credit was given in eighty schools for physical education. When credit is given for physical education the amount most commonly awarded was one-quarter unit a semester, permitting students to earn a maximum of two units. Of the schools reporting that they required physical education, thirty-five schools required it four years; eighteen schools required it two years; sixteen schools required it three years, and only seven schools required it one year.

Of the twenty-four schools requiring physical education in Rankin's[149] survey, only seven schools gave credit for boys' physical education and only six schools gave credit for girls'.

The schools of Kentucky apparently are not giving any consideration to the suggestion of La Porte's[150] in testing for the final grade in the activity class based on the four major items for the

147. *Ibid.*, p. 57.
148. Wyatt, *op. cit.*, pp. 45-47.
149. Rankin, *op. cit.*, p. 73.
150. La Porte, *op. cit.*, p. 51.

distribution of the grade. Forty-five schools were found in the survey which did not give any tests for the final grade; twenty-four schools conducted *fair* tests; twenty-nine schools had *good* tests, and only two schools had *excellent* tests.

Kentucky's schools are apparently on the same low level as the schools of the six cooperating states. Here the schools of Kentucky received an average item score of .88 in comparison to the .70 average item score received by the schools of the six cooperating states.

Schools should not permit students to substitute clerical work, janitorial work, towel dispensing, or piano playing for actual participation in physical education class activity. The schools of Kentucky evidently do not follow this rule, as it was found that forty-two schools permitted the substitution of other activities for physical education class work; fifty-eight schools did not permit this practice and required the students to take physical education.

Jones[151] found that a majority of the schools excused members of interscholastic athletic teams from regular class work in physical education. This was true in all but fourteen of the 116 which sponsored contests in basketball and all but seven schools which played football. Only two schools of fifteen did not require their tennis players to take regular work in physical education; five institutions did not excuse the members of the baseball team.

The health education course should be offered in concentrated instructional periods in addition to coordinated health counseling in other departments. It is recommended by La Porte[152] that health classes be held in quiet, comfortable classrooms, not in locker rooms or on bleachers. Health classes, La Porte suggests, should meet five hours per week for two semesters or at least the minimum of two hours per week for one semester.

Twelve Kentucky secondary schools did not have a minimum of two hours of health instruction per week for one semester; twenty-five schools had two hours of health instruction per week for one semester; thirty-seven schools conducted health instruction the equivalent of five hours per week for one semester, and twenty-six schools conducted health instruction classes five hours per week for two semesters on each level.

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151. Jones, *op. cit.*, p. 142.
152. La Porte, *op. cit.*, p. 84.

Wyatt[153] found that when health instruction is included in the high school curriculum it is most often taught in the junior year. The next most popular time for offering health is in the senior year.

Once again the Kentucky secondary schools practically doubled the score received by the schools of six cooperating states. The schools of Kentucky received an average item score of 1.77 in comparison to the .99 score received by the schools of six cooperating states.

The teaching of health as required by the enactment of the Code for Health and Physical Education (SBE 53-2) has evidently been responsible for the schools of Kentucky receiving a good score for this item. Although this score was high compared to that received by the schools of six cooperating states, it can still be improved. This improvement can be accomplished in the schools by maintaining properly equipped classrooms for the teaching of health. At the present a great majority of the schools conduct their health classes on bleachers in the gymnasium. Such an atmosphere is not conducive to an appropriate learning situation.

When students are assigned to activity classes, the following items must be taken into consideration before such an assignment is made: (1) age, (2) physical condition, (3) skill development, (4) need, and (5) interest. Grouping by grade placement alone is no longer acceptable: it "favors the older, heavier, and stronger individual, as the variance in height, weight, and age within a grade is considerable."[154] Grouping by weight alone is not advisable because "It is not known how much of the weight is fat or bone, and how much is muscle"[155] and "There is a wide variation in maturity at a given weight."[156]

The suggested class assignment, according to the five points referred to above, was not found in the surveyed schools of Kentucky. Thirty-eight schools assigned students to physical education classes at random, according to their free periods; sixty-two schools assigned the students to physical education classes by grades.

Kentucky's secondary schools for this item received an average item score of .62 compared to the score of .45 received by the schools of six cooperating states.

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153. Wyatt, *op. cit.*, p. 13.
154. Lee, *op. cit.*, p. 280.
155. *Ibid.*, p. 280.
156. *Ibid.*, p. 280.

CHAPTER IX

AN EVALUATION OF THE INTRAMURAL AND INTERSCHOOL ATHLETICS IN 100 KENTUCKY SECONDARY SCHOOLS

Closely allied with and supplementing the regular program of physical education is the intramural and interschool athletic program. These programs should be well organized and should be varied to offer opportunities for participation to the entire pupil enrollment.

This chapter will discuss the administration of intramural and interschool athletic programs conducted in the secondary schools of Kentucky.

Area—Administration of Intramural and Interschool Athletics: No program of intramurals or interschool athletics can function adequately unless it has been well organized and properly administered. The items under this area show good characteristics of such programs. The following points are good characteristics of the intramural and interschools athletic programs: (1) the intramural and interschool athletic programs are budgeted and financed from school funds, (2) students are classified for competitive purposes on the basis of the three-point classification plan, (3) instruction, coaching, and officiating of athletics is handled by women instructors for girls and by men instructors for boys, (4) well organized sport (play) days are staged periodically under trained and experienced leadership, (5) noon hour activities are carefully supervised and limited to modified sports of physiologically defensible types, (6) interschool competition for girls is under strict supervision and control of well-trained women instructors and is conducted according to girls' rules, (7) interschool competition for boys is restricted largely to local leagues—without overnight travel, state or larger championships, or post season games and is limited to seven football and sixteen basketball games, with from two to three weeks of preliminary practice preceding the first contest, (8) students are eligible for interschool competition only between the fourteenth and nineteenth birthdays, for not more than one major sport in a given semester, (9) interschool athletic policies are determined by school administrators and physical education instructors or by regularly constituted athletic leagues, and (10)

school officials provide necessary traffic and safety protection to, from, and during interschool contests.

The 100 selected Kentucky secondary schools received the identical average item score as the schools of six cooperating states, this being 1.3.

Analysis of Specific Items in the Administration of Intramural and Interschool Athletics: Many school authorities are in agreement that the intramural and interschool sports programs, for boys and girls, should be budgeted and financed from school funds, and ticket selling to athletic contests should be discouraged or prohibited. It is felt that since athletics are viewed as educational experiences, "and it seems logical that they should be considered an integral part of the educational program, then it behooves boards of education and college trustees to finance athletics in the same manner that funds are provided for books, laboratory equipment, home economic facilities, art supplies, and other similar material."[157]

Williams and Brownell state:

> It is obvious that administrators should strive to do away with an admission charge for interschool athletics, and to encourage the general public to attend these events as guests of the school. Such a procedure would doubtless decrease, if not eradicate, the numerous undesirable features associated with these contests and, at the same time, improve the educational values inherent in them.[158]

The author found that in twelve schools the intramural and interschool athletic programs were budgeted and financed solely through gate receipts from such contests; in eighty-five schools it was found that these programs were *partly* financed through school funds and that ticket sales were discouraged; in two schools the programs were *fully* financed from school funds with ticket sales to students prohibited; in only one school was it found that the programs were *fully* financed from school funds and that the public was admitted free to the athletic contests.

Since the majority of the Kentucky schools did not follow the most desirable plan of budgeting and financing the intramural and interschool sports programs entirely from school funds and did not admit the public free to such contests, it is evident that the average

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157. William L. Hughes and Jesse F. Williams, "Sports: Their Organization and Administration" (New York: A. S. Barnes and Company), 1941, p. 224.
158. Williams and Brownell, *op. cit.*, p. 66.

item score received by these schools would be low. The surveyed schools of Kentucky received an average item score of .92 compared to the average item score of .32 received by the schools of six cooperating states.

Those students engaged in competitive athletics should be classified for competitive purposes on the basis of the three-point classification plan, suggested by La Porte[159] and previously discussed in Chapter VI, in addition to the medical examination. This classification procedure is necessary in order to reduce hazards and to minimize inequalities between opponents.

Rankin's [160] survey revealed that only thirty-one, or less than one-half of the schools surveyed, required a medical examination before a boy participated in athletics.

Apparently this same deplorable condition still exists today in the secondary schools of Kentucky, as was revealed by the findings of the author. In forty-three schools students were not classified for competitive purposes on the basis of the *three-point classification plan,* in addition to the medical examination; twenty-two schools had a *fair* method of classifying students for competitive purposes, while only thirty-five schools used a *good* method for classifying students for competitive purposes. Not one school was found which had an *excellent* system for classifying students for competitive purposes.

This item received an average item score of .92 for the schools of Kentucky. The schools of six cooperating states received an average item score of .75 for the same item.

It is a desirable procedure that instruction, coaching, and officiating of athletics be handled by women instructors for girls, and by men instructors for boys, with close cooperation between the two in coeducational activities and joint sport days. Men teachers tend to employe boys' standards of performance and to pursue men's practices. Men often fail to realize the physical limitations of girls and cannot frankly and helpfully discuss health problems with them.

Very few schools, in the State of Kentucky, conduct interschool athletics for girls, and, consequently, it was not surprising to see that the Kentucky secondary schools received a low average item score for this part of the program.

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159. La Porte, *op. cit.,* p. 49.
160. Rankin, *op. cit.,* p. 84.

Women instructors were provided in those schools which sponsored interschool athletics for girls, while those schools which conducted interschool athletics for boys provided men instructors for the boys. These instructors gave instruction, coached, and officiated at the various sports with proper consideration for sexes.

Sixty-one schools failed to meet even the *approximate* standards for this item and received a score of zero; thirty-three schools did meet the *approximate* standards and received a score of two, and only six schools met the *entire* standards and received the maximum score of three.

For this item the schools of Kentucky received an average item score of .98 compared to the 1.36 average item score received by the schools of six cooperating states.

An outgrowth of many physical education and intramural programs has been the conducting of play and sport days. These days should be well-organized and be staged periodically under trained and experienced instructors with major emphasis on carry-over types of sports.

Forsythe has this to say about play days:

> There are two general types. In one instance students from one or more schools engage in competition in which the identity of the individual school is lost. Teams are composed of members of all the schools concerned. Usually, names of colors, animals, or the like are selected for the teams. The other type of play (sports) day is one in which the play is between schools whose identities are maintained. Varied activities take place and emphasis is placed on social rather than on competitive aspects. An occasional play day between two or more schools has a valuable social effect on the girls who participate—it gets them acquainted with other girls; all compete because of the wide range of activities; and such play is for the pleasure of playing, not for the benefit of an audience.[161]

Williams and Brownell state the following in regard to play and sport days:

> Play days and sport days, especially the latter, have achieved marked success among young women in secondary schools and colleges. Extension of these activities to young men and to mixed groups remains as a desirable challenge to administrators in both schools and institutions of higher learning.[162]

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161. Forsythe, *op. cit.*, p. 384.
162. Williams and Brownell, *op. cit.*, p. 213.

A low score was received by the secondary schools of Kentucky for this item, as sixty schools did not ocnduct play or sports days for girls and boys. Twenty-seven schools conducted this activity only for the girls, while only thirteen schools conducted joint sport or play days for both sexes. For this item the surveyed schools received an average item score of .95 compared to the average item score of .68 received by the schools of six cooperating states.

In many schools certain groups of children remain at school for the lunch hour. For these children there should be organized recreational activities which they can carry on for themselves. The noon hour activities should be carefully supervised and limited to modified sports of physiologically defensible types such as table tennis, shuffleboard, and deck tennis.

No evidence was uncovered in this survey which revealed any well-organized activity programs for the noon hour. The element of time made it impossible to conduct such a program, as a majority of the surveyed schools allotted but a half hour for the lunch period. Eighty-five per cent of the surveyed schools did not have sufficient time to organize noon hour activities, and only fifteen per cent of the surveyed schools had well organized noon hour activity programs which were well supervised.

Although the secondary schools of Kentucky outscored the surveyed schools of six cooperating states for this item, the difference in scores was very slight. The surveyed schools of Kentucky received an average score of 1.15 for this item compared to the 1.10 score received by the schools of six cooperating states.

Perhaps the most important athletic policy administrators must consider in planning interschool athletics is the one which has to do with the scheduling of interschool athletic contests. The welfare of the participant must be taken into consideration when schedules are planned. Forsythe states, "The proposed athletic schedule should be considered first from the welfare standpoint of the students who will be competing. Likewise they should be educationally sound."[163]

Some of the problems administrators must face when planning interschool athletic schedules are as follows: (1) restricting interschool competition for boys largely to local leagues, (2) overnight travel, (3) state championships, (4) postseason games, (5) limitation

163. Forsythe, *op. cit.*, p. 150.

of the number of games for the various sports conducted, and (6) number of weeks of preliminary practice before the first contest.

During the past twenty-five years, many high schools have grouped themselves together into leagues and conferences for interscholastic competition. These leagues and conferences establish principls and policies as far as their athletic relations are concerned. "Their chief purpose," states Forsythe, "have been the arrangement of schedules, declaring of league championships, maintenance and preservation of records, and assignment of athletic officials."[164]

When leagues and conferences are formed, they should be of the local nature. Leagues and conferences usually include a small geographical section of the state, with membership composed of schools of comparable size which sponsor similar athletic activities. Local leagues make it possible for better organization, as they can provide more opportunity for schools of comparable size to compete with each other and at the same time allow the determination of league championships through local competition without excessive team travel.

School administrators should discourage overnight travel when schedules are planned and should arrange their schedules so that short trips of less than four hours length are taken on the day of the game. Hughes and Williams are in agreement with this policy for the following reasons.

1. Athletes rest better in their own homes.
2. Strange water and food are to be avoided as much as possible. Athletes are subject to laws of habit and changes affect their performance.
3. Long waits in strange surroundings are tiring.
4. Few, if any classes are missed.
5. This is a more economical policy.[165]

Many outstanding educators, such as Hughes and Williams and Williams and Brownell, are in agreement that state championship tournaments and post season games should be discouraged. They feel such contests tend to overemphasize the sports and are educationally unsound.

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164. *Ibid.*, p. 174.
165. Hughes and Williams, *op. cit.*, p. 224.

Hughes and Williams state the following in regards to post-season, charity, and night games:

> The scheduling of post-season, and charity games, and night football games should be discouraged. Post-season contests tend to overemphasize the sport, charity games involve our amateur games in politics, and night football has little justification in educational institutions from a commercial standpoint, although it may be desirable in Southern climates during September or early October.[166]

Williams and Brownell agree that state tournaments should be discouraged because:

> State chompionships and the selection of all-state teams represent the products of a professional rather than an educational point of view. In some states, district and sectional tournaments select the teams for the final games played to determine the winner in various sports. Perhaps state tournaments suggest the neglect of educational guidance directed toward the proper organization and conduct of athletic activities. At best these tournaments serve to finance state high school athletic associations, stimulate alumni and town interest, publicize coaches and provide newspaper copy. On the debit side these contests add nothing in the form of wholesome experiences for participants not available in regularly scheduled season games, often produce an unwholesome physical effect on players, and foster opportunities for gambling difficult to control.[167]

The tendency in many high schools is to work the boys too hard and too long. Practice periods usually are arranged daily and the schedule of games, states Williams and Brownell, "extends over a period of weeks, and the number of contests exceeds the educational values obtained therefrom. Herein lies a flagrant source of over-emphasis."[168]

Many states have now set a maximum for the number of games a school may play and have limited the time during which its contests may occur in order that exploitation and undue emphasis may be reduced. The main sports that are affected by such limitations are basketball and football.

Williams and Brownell[169] feel that the maximum number of games a high school should schedule in football should be six and twelve games should be the maximum in basketball. Williams and Hughes[170] believe that the limit should be seven or eight games in

166. *Ibid.*, p. 226.
167. Williams and Brownell, *op. cit.*, pp. 229-230.
168. *Ibid.*, p. 226.
169. *Ibid.*, p. 226.
170. Williams and Hughes, *op. cit.*, p. 233.

football and between fifteen and eighteen games in basketball. La Porte[171] suggests that the limits in football should be seven games and not over sixteen games in basketball.

In 1933 Jones[172] reported that 116 schools of 125 he surveyed sponsored basketball teams for interscholastic competition. Two-fifths of the total number of schools surveyed had football teams whose schedule of games ranged from three to eleven.

Rankin[173] reported that everyone of sixty-six Kentucky secondary schools he surveyed had interscholastic basketball teams. Twenty-three of the surveyed schools had football teams. The number of basketball games reported ranged from ten to thirty-eight; in football the scheduled number of games ranged from seven to eleven.

The author found that the principal sports in which interschool competition was conducted were football, basketball, track, tennis, baseball, golf, swimming, and softball.

All of the surveyed schools reported that they had basketball teams which engaged in interschool competition. The number of basketball games reported by the surveyed schools ranged from twelve games to thirty-two. The average number of games reported was twenty-four.

Less than 20 per cent of the schools had football teams and the number of games reported by these schools ranged from four to ten games. Some of the schools sponsored six man football teams.

An average item score of 1.80 was received by Kentucky's secondary schools for this item. Only eighteen schools failed to meet the *approximate* standards. Two schools were found which met the *entire* standards for this item. The schools of six cooperating states received an average item score of 1.99 for the same item.

The reader will probably assume by the above average item score that the secondary schools of Kentucky are conducting better than average interschool athletic programs for boys. Closer inspection of this figure will disclose glaring defects in the interschool athletic programs.

Overemphasis in football and basketball was perhaps the greatest defect noted in the interschool athletic programs. Basketball

171. La Porte, *op. cit.*, p. 49.
172. Jones, *op. cit.*, pp. 137-141.
173. Rankin, *op. cit.*, pp. 82-85.

draws the majority of criticism, as it was in this sport that the greatest amount of overemphasis was uncovered.

In the first place, the basketball season is entirely too long, and the number of games scheduled far exceeds the number recommended by the Committee on Curriculum Research of the College Physical Education Association.

For a majority of the schools, the basketball season begins very early in November and is concluded either in the second or third week of March. It is only fair to add that most of the schools which start early in November sponsor only one major sport and it is necessary to schedule more games to bring added revenue to the institutions.

As mentioned earlier, the average number of games revealed through this survey was twenty-four, far exceeding the number of sixteen games recommended by the Committee on Curriculum Research of the College Physical Education Association. The author is aware of other schools, not included in this survey, which schedule between twenty-four and thirty-eight games a season. Too many pressures are brought upon the participant and the coaching staff when such an alarming number of games is scheduled.

From week to week the participant is kept constantly in a high state of nervous tension preparing for each game. The coaches must annually produce winning teams in order to keep their positions. These conditions are educationally unsound and must be eliminated either by local or by state athletic associations.

Several years ago the upper age limit for contestants in interschool competition was twenty-one. Now, according to Forsythe,[174] the trend in the upper age limit is downward and at the present is twenty years. In several states the upper age limit is nineteen years. There is some tendency to establish lower age limits in some states for participation in certain sports. In New York a boy must be fourteen years old before he may compete in interschool athletic competition. The State of Michigan requires that a boy must be fifteen before he may compete in cross country or in any track event of 440 yards or more.

In regards to the number of semesters a person may compete in interschool athletics it was found that the regulation varies in difrefent states, with a tendency toward eight and in some states the maximum of ten semesters of competition is permitted.

174. Forsythe, op. cit., p. 56.

The Committee on Curriculum Research of the College Physical Education Association[175] recommends that students should be eligible for interschool competition only between their fourteenth and nineteenth birthdays; for not more than four years in any one sport, and for not more than one major sport in a given semester or term.

Evidently the recommendations of the above committee are not being followed by the schools in Kentucky. Twenty-nine schools did not even meet the *approximate* standards of this item and were awarded zero points; sixty-four schools met the *approximate* standards and were awarded two points, while only seven schools met the *entire* set of standards and were awarded three points.

Interschool athletics, like other organizations, must have well defined policies to guide them in the performance of their administrative responsibilities. The interscholastic athletic policies should be determined by school administrators and physical education instructors or by regularly constituted school athletic leagues. Interschool athletics must be controlled to prevent overemphasis and exploitation of the participant and it is only through these official bodies that such control may be guaranteed. The following are some common matters, suggested by Forsythe, to which school administrators may well give consideration in establishing their athletic programs and policies.

1. The relation and division of available facilities and personnel between intramural and interscholastic athletics.
2. The number of sports activities in which the school can offer (a) proper teaching and coaching; (b) adequate equipment and (c) satisfactory playing facilities.
3. Educationally justifiable athletic schedules—length of them and frequency of games.
4. Methods of financing the athletic program.
5. Determining whether girls' interscholastic athletics should be a part of the program.
6. The place of junior high school athletics in the general athletic program.
7. The student and faculty relation in the organization for the control of athletics.
8. Understanding of the relation of the local school to its league and state athletic association.
9. The policy of the school in the care of and payment for, athletic injuries.

175. La Porte, *op. cit.*, p. 86.

10. Delegation of authority to coaches or faculty managers in matters pertaining to contracts, eligibility, equipment, schedules, officials, and the like.[176]

Apparently the interscholastic athletic policies, in the schools of Kentucky, are being determined by school administrators and athletic coaches, as evidenced by the results obtained from this item. Only five schools failed to meet even the *approximate* standards of this item; forty-five schools met the *approximate* standards, and fifty schools met the *entire* set of standards on this item.

Kentucky schools received their third highest score for this item as they received an average item score of 2.40 compared to the average item score of 2.32 received by the schools of six cooperating states.

Transportation of the athletic team is the most important item in connection with games away from home. School officials should provide the necessary traffic and safety protection to, from, and during interschool contests. "If at all possible," Forsythe suggests, "athletic teams should be carried only by bonded, public carriers."[177] Private cars driven by adults are the most common means of transporting athletic teams but should not be used unless absolutely necessary. Schools and private car owners should be sure they understand the public utility and public liability laws of their states, where such an arrangement is in effect.

School officials should maintain a school physician in attendance at all major athletic contests. The school physician should go upon the field of play in case of injury to players and should determine the fitness of a player to continue in participation. This should not be left up to the judgment of the coach or trainer. Small schools which are unable to hire a full-time school physician should hire the services of a physician during contests.

These safety standards were met *approximately* by eighty surveyed schools; in twelve schools the safety standards were *entirely* met. In only eight surveyed schools were these safety standards not even approximately met. Those schools which met the approximate standards failed to have a physician in attendance at games away from home.

For this final item the surveyed schools of Kentucky received an average item score of 1.97 in comparison to the average item score of 2.12 received by the schools of six cooperating states.

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176. Forsythe, *op. cit.*, pp. 147-148.
177. *Ibid.*, p. 196.

CHAPTER X

RESULTS OF AN EVALUATION OF THE HEALTH AND PHYSICAL EDUCATION PROGRAMS OF 100 KENTUCKY SECONDARY SCHOOLS

The results of the survey of health and physical education programs of 100 Kentucky secondary schools will be more meaningful if compared with the results obtained in other cooperating states. Comparisons have been made between Kentucky's county and independent secondary schools and comparisons have also been made between the State of Kentucky and six other cooperating states. It is hoped that through charts, graphs, and figures that the educational leaders will become conscious of the obvious weaknesses in their programs and take the necessary measures to rectify the situation and bring their programs up to a par with other leading states.

Kentucky secondary schools were divided into two major groups; (1) county schools, (2) independent schools. This procedure was followed in order to make a comparison between the two groups. In each group the schools were ranked according to the number of points each had accumulated, as suggested by the scoring system provided by the La Porte Score Card Number II. The total number of points that could be earned in the use of the La Porte Score Card Number II is 300. The score card, as previously mentioned, is divided into ten major areas, each of equal weight totaling thirty points. It is possible to compute the raw score of the ten major areas into a percentage by dividing the total raw score by three.

The total raw scores of the two groups of Kentucky secondary schools, county and independent, are portrayed graphically by the bar graphs of Figs. 2 (page 483) and 3 (page 484). It was found that 166 was the highest raw score achieved by any surveyed school; seventeen was found to be the lowest.

The bar graph shown in Fig. 4 (page 486) makes a comparison of the La Porte Score Cards' ten major area scores received by the 100 Kentucky secondary schools. Area scores of six cooperating states were obtained and computed into one score. This bar graph compares the area scores of six cooperating states with the area

scores obtained by the Kentucky schools. It was possible to score thirty points under each major area.

In Fig. 5 (page 487) the raw scores earned by the 100 selected Kentucky schools were computed into a percentage. The highest raw score was 166 which equals 55 per cent; the lowest raw score was 17 which equals approximately 6 per cent. Using the highest and lowest scores it was possible to compute Q_1, Q_2, and Q_3. These measures of distribution show the frequency of the scores attained in each quartile. Once again the scores of other cooperating states were used to show a comparison with the State of Kentucky.

An ogive curve was developed as another method of portraying a comparison of the health and physical education programs for the State of Kentucky with other cooperating states. The ogive curve shown in Fig. 6 (page 488) shows the cumulative frequency of the total scores as well as the percentile rank of any score.

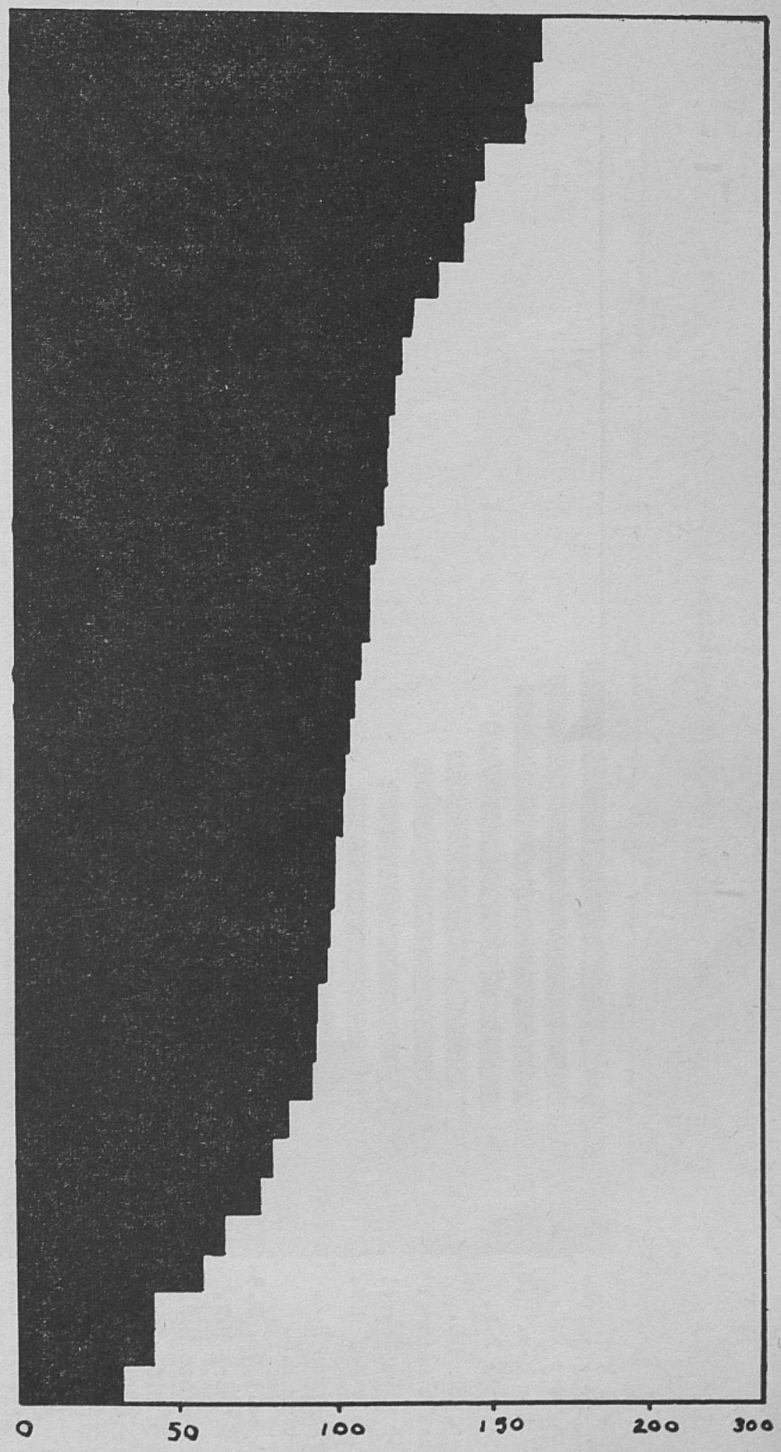

Fig. 2.--Total raw scores of Kentucky secondary schools (Independent schools)

Fig. 3.--Total raw scores of Kentucky secondary county schools

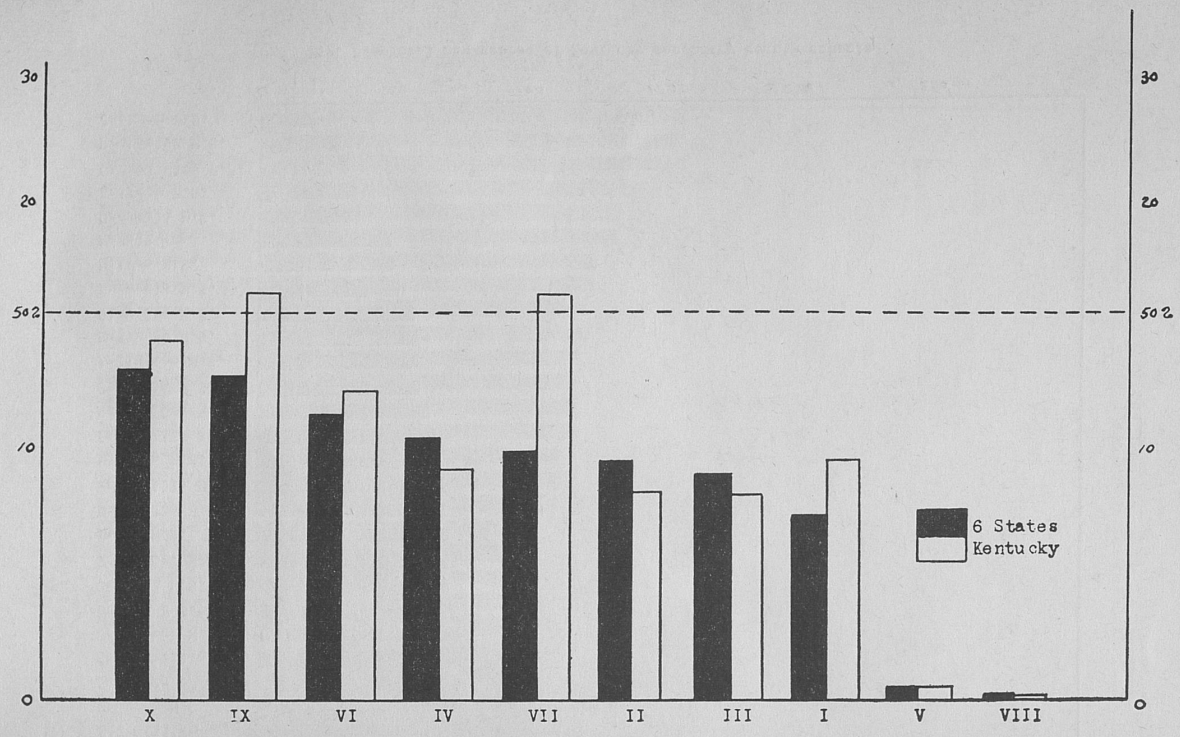

Fig. 4.--La Porte Score Card Area Scores, based upon Illinois, Iowa, Minnesota, Mississippi, Tennessee, West Virginia in comparison with Kentucky.

Fig. 4.--La Porte Score Card Area Scores, based upon Illinois, Iowa, Minnesota, Mississippi, Tennessee, West Virginia in comparison with Kentucky.

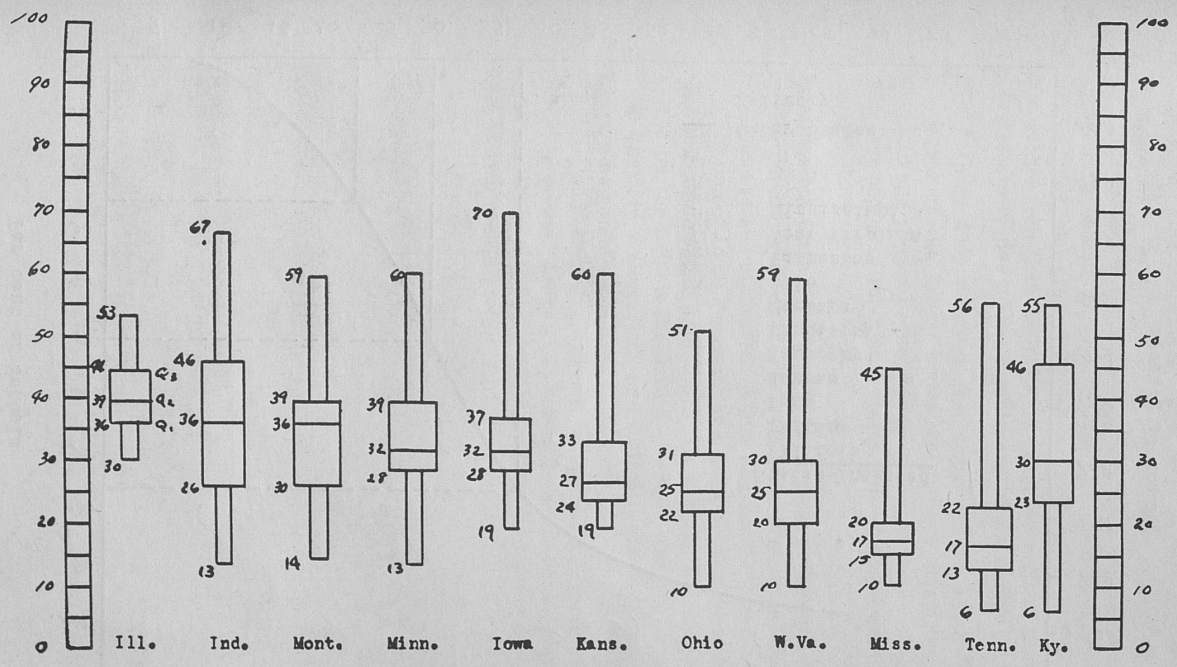

Fig. 5.--Preliminary total score analysis of National Survey of Health and Physical Education in secondary schools by means of the La Porte Score Card Number II.

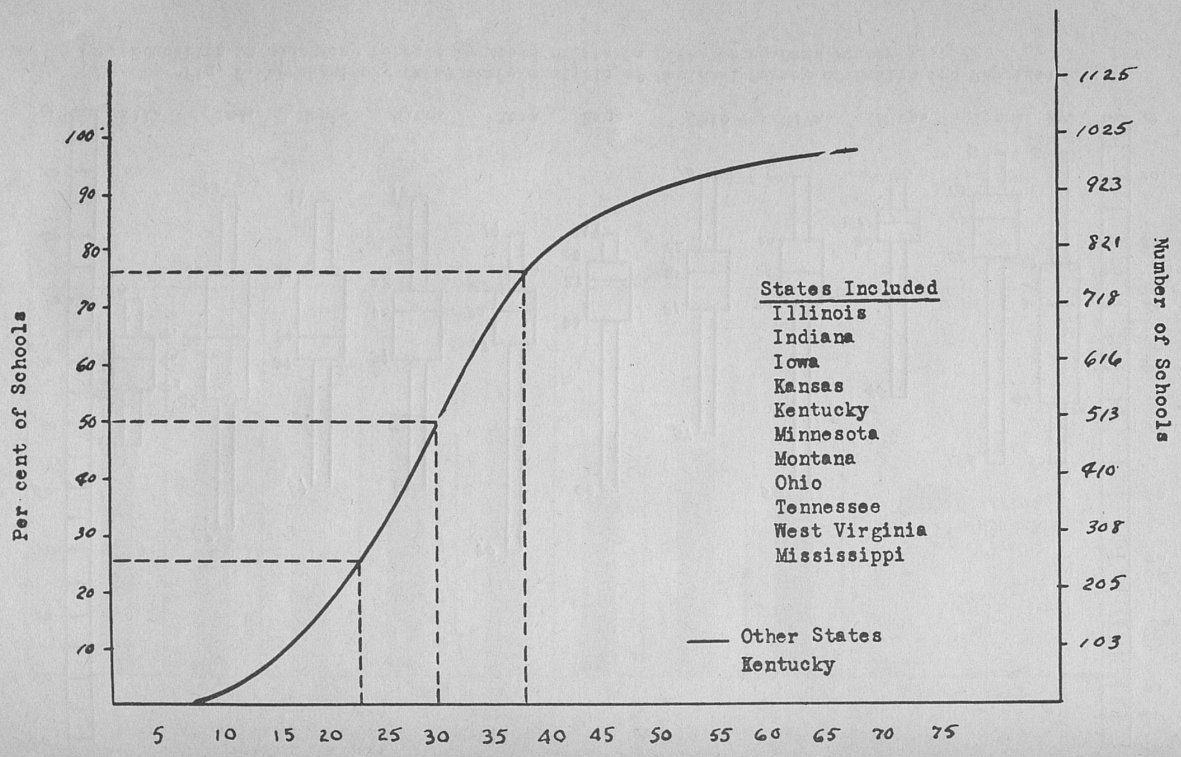

Fig. 6.--A Kentucky Ogive Curve in comparison with a tentative ogive curve showing percentile ranks corresponding to per cent of total La Porte Score Card scores based upon 1125 visited schools, 1951-1953.

The results of nine additional states, plus the original six co-operating states, have been included in Figs. 7-10. These additional figures were forwarded to the author by Dr. Karl W. Bookwalter, Indiana University, acting as co-ordinator and clearing house for the national survey, and arrived too late to be incorporated in this study. The author feels that the inclusion of these results of the nine additional states will give added significance to the study.

Figure 7 (page 490) portrays graphically the La Porte Score Card area scores of the fifteen states which have completed the survey of health and physical education programs in their respective states. The area scores of the fifteen states were obtained and computed into one score for each area.

It was possible for a school to score a total of thirty points for each of the ten major areas. The schools of the fifteen cooperating states scored an average of thirteen points in Area 9 (Organization and Administration of Class Programs and Area 10 (Organization of Intramural and Interschool Athletics). An average of ten points were received by the schools for Area 2 (Outdoor Areas). Areas 4 (Locker and Shower), 6 (Supplies), and 7 (Health Service) received an average of nine points while Area 3 (Indoor), received an average of eight points, and Area 1 (Program of Activities), received an average of seven points. Areas 5 and 8 were found to be the weakest areas of the schools in all fifteen states, as these two areas received an average of two points.

5 10 15 20 25 30 35 40 45 50 55 60 65 70 75

Fig. 6.--A Kentucky Ogive Curve in comparison with a tentative ogive curve showing percentile ranks corresponding to per cent of total La Porte Score Card scores based upon 1125 visited schools, 1951-1953.

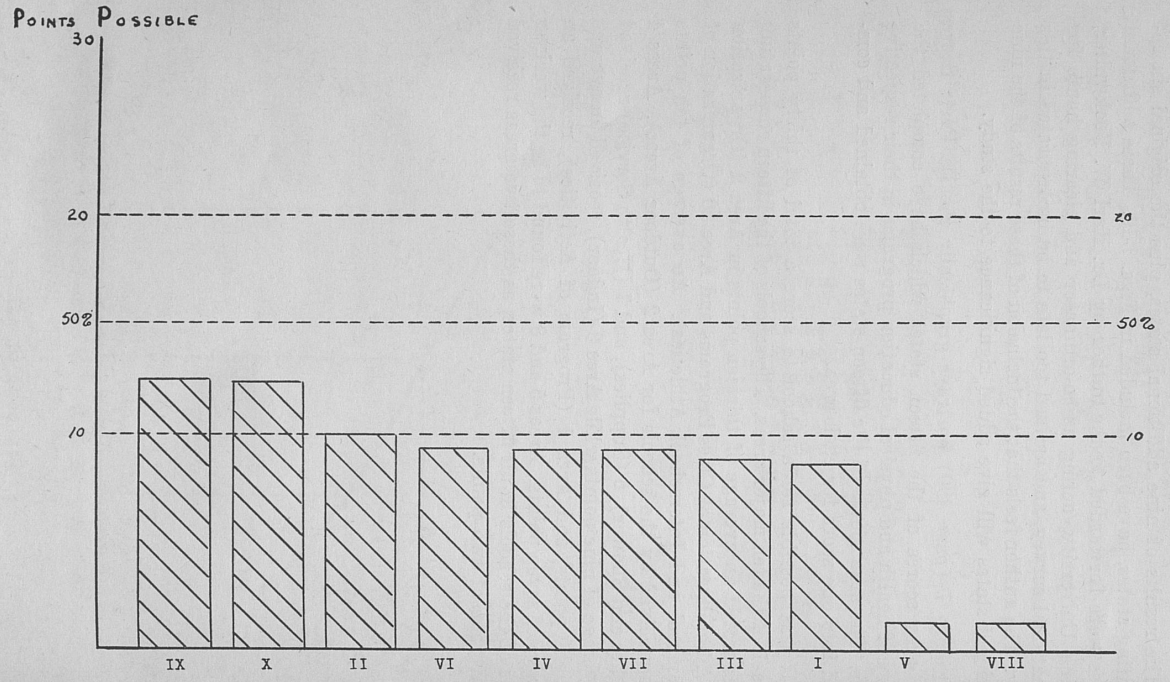

Fig. 7.--1952 La Porte Score Card area scores based upon Colorado, Illinois, Indiana, Iowa, Kansas, Kentucky, Louisiana, Minnesota, Mississippi, Missouri, Montana, New York, Ohio, Tennessee, and West Virginia.

The total raw scores earned by the schools of the fifteen co-operating states were computed into a percentage as shown in Fig. 8 (page 492). The State of Iowa received the highest raw score, which equaled approximately 70 per cent. Three states, Kentucky, Colorado, and Mississippi, received the lowest total raw score which equaled approximately 5 per cent. Using the highest and lowest scores it was possible to compute Q_1, Q_2, and Q_3. These measures of distribution show the frequency of the scores attained in each quartile. The national sample of 1628 schools shows that the average Q_1 was 22 per cent, Q_2 was 28 per cent, and Q_3 was 37 per cent. Kentucky's highest total raw score was 166 which equaled 55 per cent; the lowest total raw score was 17 which equaled approximately 6 per cent. In the frequency of the scores attained in each quartile Kentucky's Q_1 was found to be 23 per cent, Q_2 was 30 per cent, and Q_3 was 46 per cent.

A second ogive curve was developed as shown in Fig. 9 (page 493) and shows the cumulative frequency of the total scores as well as the percentile rank of any score. A total of 1528 schools in fifteen states were used to develop this curve in comparison to the 1125 schools of eleven states utilized in the ogive curve shown in Fig. 6 (page 102). The measures of distribution for the 1528 schools showing the frequency of the scores in each quartile found that Q_1 was 21.5 per cent, Q_2 was 28.5 per cent, and Q_3 was 36.5 per cent.

IX X II VI IV VII III I V VIII

Fig. 7.--1952 La Porte Score Card area scores based upon Colorado, Illinois, Indiana, Iowa, Kansas, Kentucky, Louisiana, Minnesota, Mississippi, Missouri, Montana, New York, Ohio, Tennessee, and West Virginia.

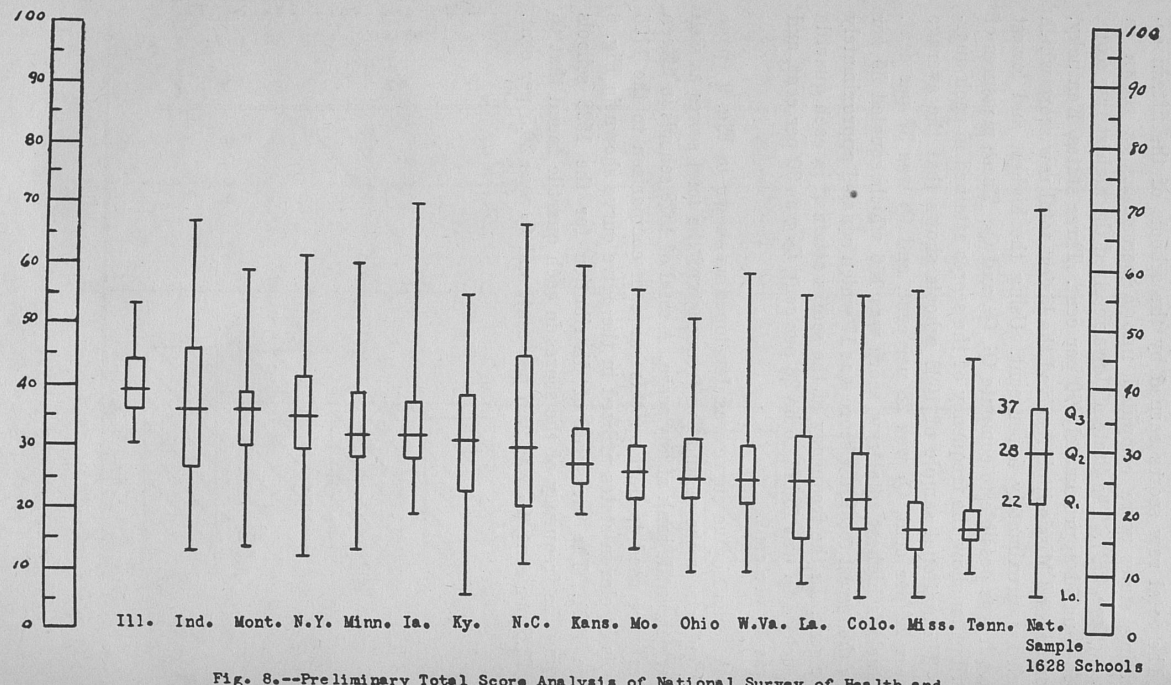

Fig. 8.--Preliminary Total Score Analysis of National Survey of Health and Physical Education in secondary schools by means of the La Porte Score Card No. II

1528 - 100

Sample
1628 Schools

Fig. 8.--Preliminary Total Score Analysis of National Survey of Health and Physical Education in secondary schools by means of the La Porte Score Card No. II

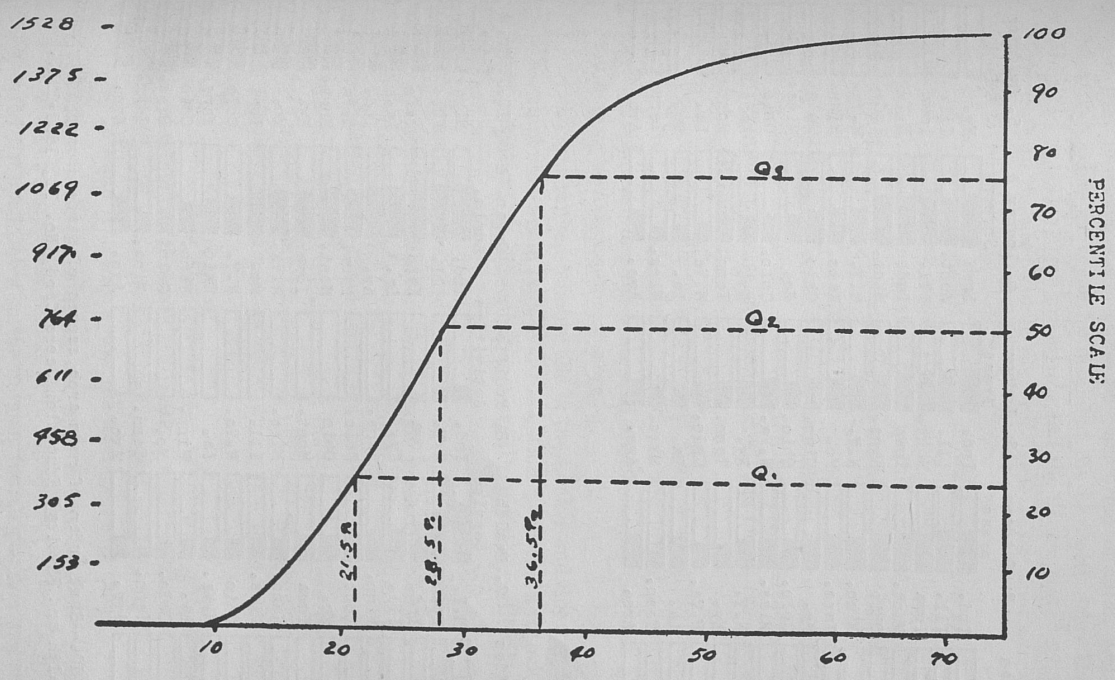

Fig. 9.--Cumulative frequency curve of percentage of total score on Health and Physical Education using the La Porte Score Card No. II, for 1528 high schools in 15 states, 1950-1953.

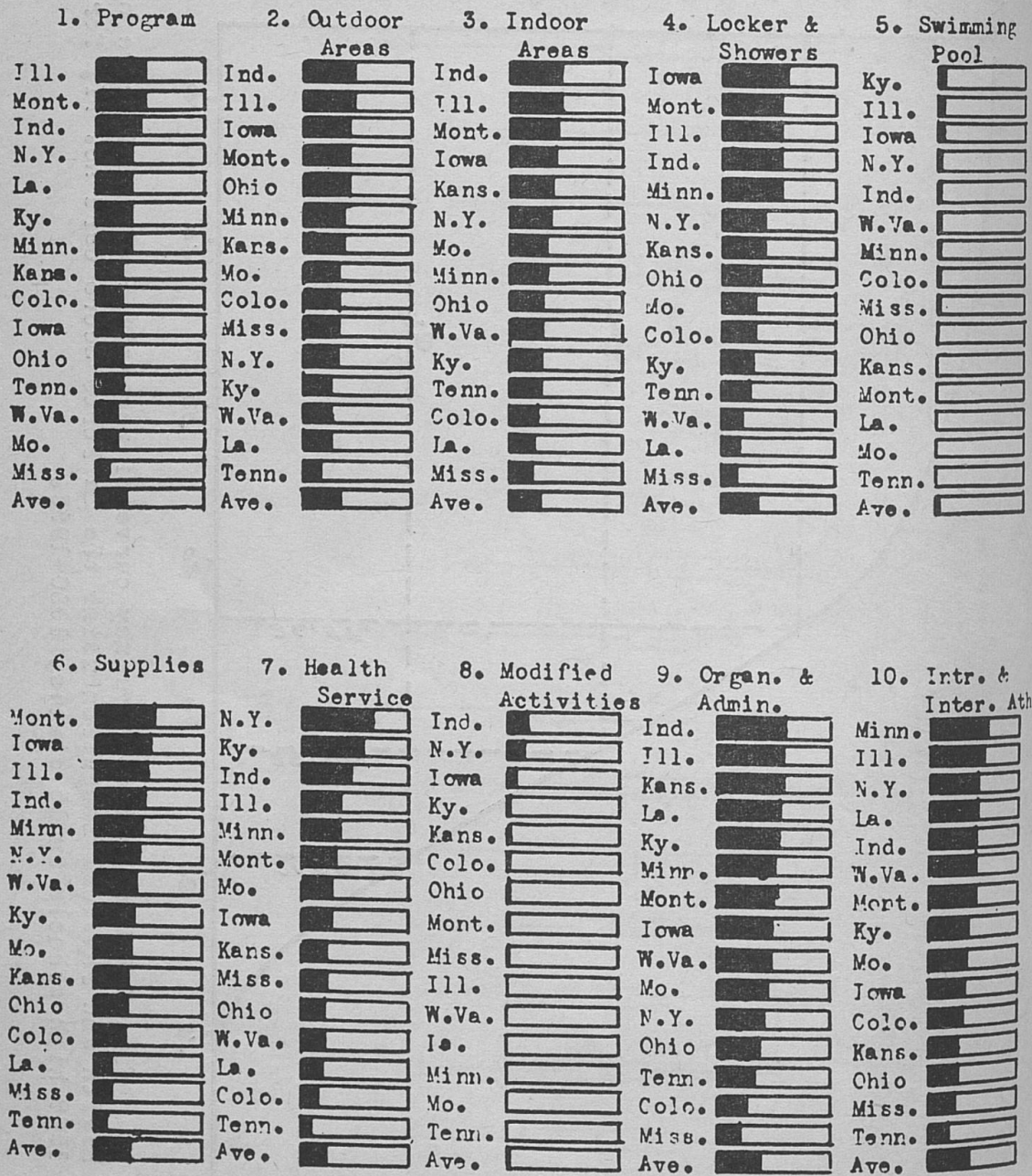

Fig. 10.--Rank order of mean area scores of states surveyed by means of the Health and Physical Education Score Card, No. II, 1950-1953.

Fig. 10 (page 494) shows the rank order of mean area scores of fifteen states surveyed by means of the La Porte Score Card No. II. The ten major areas are shown and the fifteen states are ranked according to the area scores they received. A national average has been developed for each area.

The Program of Activities Area shows that Illinois and Montana received the highest mean scores and Mississippi received the lowest. Kentucky was ranked sixth in this area. According to the average of the fifteen states Kentucky ranked a little better than the average.

In the Outdoor Area, Indiana and Illinois received the highest ranking while Tennessee received the lowest. Kentucky dropped down to number twelve in this area and was below the average obtained for all the states.

Once again Indiana and Illinois show a high ranking in the Indoor Area while Mississippi received the lowest ranking mean score. This area found the State of Kentucky in the eleventh position and below the average mean score.

Iowa was ranked number one in the Locker and Shower Area as Mississippi once again took over the bottom position. Kentucky once again remained in the number eleventh position, still below the average mean score.

Kentucky was ranked number one in the Swimming Pool Area and Tennessee took over the bottom position. Kentucky was a little better than the average for this area. All fifteen cooperating states received poor mean scores for this area.

Montana ranked number one in the Supplies Area with Tennessee once again holding the fifteenth position. In this area the State of Kentucky ranked number eight and was a little better than the average.

New York took the number one ranking in the Health and Service Area and Tennessee still ranked number fifteen. The State of Kentucky did surprisingly well in this area as it was ranked number two and was way above the average mean score.

Indiana took the number one spot in the Modified Activities Area and Tennessee still remained in the number fifteenth position. Kentucky dropped down to the number fourth position and ranked about just average for this area. All schools received very poor scores in this particular area.

For the fourth time Indiana ranked number one in the Organization and Administration of Class Programs Area. Mississippi took over the bottom position while Kentucky took over the number five position. Kentucky received a little better than the average score.

Minnesota was ranked number one in the Organization of Intramural and Interschool Athletic Program Area while Tennessee for the sixth time was ranked number fifteen. For this final area, Kentucky was ranked number eight and was just a little below the average mean score.

CHAPTER XI

SUMMARY EVALUATION OF THE STUDY AND RECOMMENDATIONS

The author in cooperation with the national survey committee of The College Physical Education Association of the American Association for Health, Physical Education, and Recreation which had as its' objective the evaluation of health and physical education programs of the Nations' secondary schools utilizing the La Porte Score Card Number II, made a survey of the health and physical education programs for the State of Kentucky.

One hundred Kentucky secondary schools participated in this survey and were selected by the random sampling method. The La Porte Score Card Number II was applied to the schools' health and physical education program of the schools selected. Evaluation of these programs were made by personal interview with the physical education instructor, principal, actual observation, and through a guided tour of the plant and its' facilities.

The La Porte Score Card Number II was developed after twenty-three years of intensive study by the Committee on Curriculum Research of The College Physical Education Association and hundreds of representatives. This score card covers the ten recognized major areas of health and physical education. Each area contained ten items with each item worth a possible three points. The total number of points that could be earned for these 100 items was 300 points. The highest score received by a Kentucky secondary school was 166 and the lowest score was 17.

This study has revealed many significant facts regarding the status of health and physical education programs in the secondary schools of Kentucky. These facts will be summarized here.

1. Under the program of activities area, the secondary schools of Kentucky were found below the established minimum standards.
2. Outdoor playing areas were found inadequate to conduct a good program of activities as they were limited in size, were not marked off or equipped for individual and team activities, and the court and field areas were not surfaced with the proper materials.

3. The necessary indoor area facilities to conduct a good program for health and physical education were not evident in the 100 selected schools.

4. Locker and shower room areas of the secondary schools were not constructed to provide adequate floor space to care for the peak load of use. They were primarily constructed to meet the needs of basketball teams and not physical education classes.

5. No swimming pools were reported in the secondary schools of Kentucky. Therefore, it was impossible to conduct an aquatic program. Very few schools encouraged pupils to take part in "learn to swim campaigns" conducted during the summer vacation period.

6. An adequate supply of balls and similar equipment were found available for class instruction in all team and individual activities that were offered. Schools did not provide the necessary uniforms for physical activity classes or towel and laundry service for their pupils.

7. The enactment and enforcement of the Code for Health and Physical Education has been responsible for improving the health programs in the secondary schools of Kentucky. There is a lack of community physicians to conduct medical examinations making it impossible to properly classify pupils for activity classes.

8. There are no definite modified or individual corrective programs being conducted in the Kentucky secondary schools. This is due to the lack of qualified personnel and facilities to conduct such a program.

9. The class programs for the selected schools have evidently been well-organized and administred as revealed by the results of this survey. This area received one of the highest area scores.

10. Intramural and interschool athletic programs have been fairly well-organized and administred. There is still an overemphasis on basketball and football programs.

RECOMMENDATIONS

The purpose of the La Porte Score Card Number II is to center attention upon the characteristics of a good program in health and physical education and to provide an opportunity for a school to compare its offering somewhat objectively with these characteristics. The evaluation should serve to disclose significant weaknesses that are subject to improvement and not merely a critical rating of a school.

The evaluation of the final results of the health and physical education programs now conducted in the secondary schools of Kentucky has revealed some significant weaknesses in which improvement is necessary. To the educational leaders of the State of Kentucky the author offers the following recommendations for improving the health and physical education programs of the secondary schools of Kentucky. If these recommendations are strictly followed the health and physical education programs of the secondary schools of Kentucky will rank high with the same programs carried on by other leading states.

1. Set up a minimum standards program of physical education in Kentucky secondary schools.
2. In the approval of school plants and facilities the State Department of Buildings and Grounds should set up standards concerning gymnasiums and play areas.
3. A syllabus for physical education programs should be developed for Kentucky secondary schools based on present personnel and facilities.
4. More emphasis should be placed in teacher training institutions in the State of Kentucky on the qualifications of teachers for corrective and remedial phases of physical education.
5. More encouragement should be given by Kentucky secondary schools in the promotion of "learn to swim campaigns."
6. School administrators should be encouraged to better the physical educational and recreational programs for girls.
7. Kentucky secondary schools should be encouraged to provide and extend the use of schools' facilities for an overall recreational program for the citizens of their community.
8. Steps should be taken to expend present physical education programs to include facilities and equipment for individual and dual sports.
9. Provisions should be made at some period during the school day toward organizing and supervising intramural participation and more emphasis should be placed on the inclusion of recreational activities as well as competitive sports.
10. A more intensive driver training program should be organized and instituted in Kentucky secondary schools to reduce teenage driver fatalities.
11. Schools must provide better medical service for conducting medical examinations and should be more thorough in order that pupils will be properly classified for physical activity classes.

12. There should be a reduction in the size of the present overcrowded physical education classes and at the same time the number of periods per week of physical education should be increased.

13. The State High School Athletic Association must reduce the number of basketball and football games its' members schedule until it conforms to the standards established by the Committee on Curriculum Research of the College Physical Education Association.

14. In the future planning of school buildings provisions must be made to provide appropriately equipped rooms for the teaching of health education.

15. In the administration of class programs, instructors must place more emphasis upon co-ordinate teaching; combining with performance fundamentals, the necessary rules, team strategy, social and ethical standards, health and safety factors and attempt to adapt their programs to outside recreational needs and interests.

APPENDIX A

LIST AND LOCATION OF 100 KENTUCKY SECONDARY SCHOOLS SELECTED BY RANDOM SAMPLING

ADAIR (County)
Columbia High School
Jackman High School (Colored)
Knifley High School

BARREN (County)
Glasgow High School
Hiseville High School

BATH (County)
Owingsville Cons.

BELL (County)
Pineville High School

BOONE (County)
Burlington High School
Hebron High School

BOURBON (County)
Bourbon County Vocational
7th St. Jr. & Sr. H. S. (Paris)

BOYLE (County)
Parksville High School
Perryville High School

BUTLER (County)
Morgantown High School
Rochester High School

CALDWELL (County)
Dotson High School (Colored)
Fredonia High School

CALLOWAY (County)
Hazel High School
Lynn Grove High School
Murray High School (Colored)

CAMPBELL (County)
Campbell County High School

CARLISLE (County)
Arlington High School
Bardwell High School

CARTER (County)
Erie School (Private)

CHRISTIAN (County)
Lacy High School
Sinking Fork High School

CLARK (County)
Oliver High School (Colored)

CLAY (County)
Clay County High School

DAVIESS (County)
Daviess County High School
Mt. St. Joseph Aca. (Par.)
Owensboro Senior High School
St. Mary of the Woods (Par.)
St. William (Par.)
Western High School (Colored)

ESTILL (County)
Estill County High School

FAYETTE (County)
Dunbar High School (Colored)
Henry Clay High School
Lafayette High School
Lexington Catholic H. S. (Par.)

FRANKLIN (County)
Frankfort High School
Good Shepherd (Par.)
Mayo-Underwood H. S. (Colored)

FULTON (County)
Riverview High School (Colored)

GARRARD (County)
Camp Dick Robinson

GRANT (County)
Corinth High School
Mason High School
Williamstown High School

GRAVES (County)
Dunbar High School (Mayfield) (Colored)

GREENUP (County)
McKell High School
Russell Central High School
Wurtland High School

HARDIN (County)
Bond-Washington (Colored)
Lynnvale High School
Vinegrove High School

HARLAN (County)
Benham High School
Hall High School
Harlan High School
Lynch High School
Lynch Rosenwald (Colored)

HARRISON (County)
Cynthiana High School

HENRY (County)
Campbellsburg High School

JACKSON (County)
Annville Institute (Private)

JEFFERSON (County)
Eastern High School
J. M. Atherton High School
Valley High School

JESSAMINE (County)
Wilmore High School

JOHNSON (County)
Paintsville High School

LARUE (County)
Buffalo High School

LAUREL (County)
Lilly High School
London High School

LAWRENCE (County)
Louisa High School

LETCHER (County)
Fleming-Neon High School
Whitesburg High School

LINCOLN (County)
McKinney High School

MADISON (County)
Central High School
Richmond Elem. & H. S. (Colored)

McLEAN (County)
Sacramento High School

MAGOFFIN (County)
Salyersville High School

MASON (County)
John G. Fee (Maysville Colored)
Maysville Jr. & Sr. High School
Minerva High School

MERCER (County)
McAfee High School
Salvisa High School

MORGAN (County)
Cannel City High School

MUHLENBERG (County)
Bremen High School

OHIO (County)
Central Park High School
Cromwell High School

PULASKI (County)
Shopville High School

RUSSELL (County)
Jamestown High School

SHELBY (County)
Lincoln Institute (State)

SPENCER (County)
Taylorsville High School

TAYLOR (County)
Campbellsville High School
Taylor County High School

TRIGG (County)
Trigg County High School

WASHINGTON (County)
Springfield High School

WEBSTER (County)
Dixon High School
Rosenwald High School (Colored)
Sebree High School

WHITELY (County)
Corbin High School

WOLFE (County)
Campton High School

TABLE 2

AVERAGE ITEM AND AREA SCORES FOR HIGH SCHOOL HEALTH AND PHYSICAL EDUCATION PROGRAMS, ACCORDING TO THE LA PORTE SCORE CARD IN ILLINOIS, IOWA, MINNESOTA, MISSISSIPPI, TENNESSEE, WEST VIRGINIA, COMPARED WITH THE STATE OF KENTUCKY

AREA		Avg. Item Score, Ky.		Avg. Item Score 6 States	Diff. of Item Scores	Avg. Area Score, Ky.	Avg. Area Score 6 States
PROGRAM:	Item:	1.	.86	Item: 1. .68	+ .18		
		2.	.99	2. 1.00	− .01		
		3.	1.14	3. 1.22	− .08		
		4.	.67	4. .58	+ .09		
		5.	.51	5. .50	+ .01		
		6.	.30	6. .26	+ .04		
		7.	1.54	7. 1.46	+ .08		
		8.	1.70	8. .85	+ .85		
		9.	1.10	9. .71	+ .39		
		10.	.59	10. .36	+ .23		
						.94	.76
OUTDOOR:		1.	1.14	1. 1.88	− .74		
		2.	.72	2. 1.02	− .30		
		3.	.44	3. .65	− .21		
		4.	.79	4. 1.56	− .77		
		5.	.84	5. .90	− .06		
		6.	1.30	6. 1.12	+ .18		
		7.	.93	7. .62	+ .31		
		8.	1.01	8. .85	+ .16		
		9.	.74	9. .87	− .13		
		10.	.71	10. .51	+ .20		
						.86	1.00

TABLE 2—Continued

AREA		Avg. Item Score, Ky.		Avg. Item Score 6 States		Diff. of Item Scores	Avg. Area Score, Ky.	Avg. Area Score 6 States
INDOOR:	Item:	1.	1.23	Item: 1.	1.34	− .11		
		2.	1.63	2.	1.57	+ .06		
		3.	1.08	3.	.84	+ .24		
		4.	.43	4.	.40	+ .03		
		5.	.38	5.	.46	− .08		
		6.	.44	6.	.62	− .18		
		7.	.77	7.	.59	+ .18		
		8.	.56	8.	.98	− .42		
		9.	.37	9.	.80	− .43		
		10.	1.21	10.	1.40	− .19		
							.81	.90
LOCKER:		1.	.70	1.	1.32	− .62		
		2.	.47	2.	.81	− .34		
		3.	.48	3.	.48	.00		
		4.	.58	4.	.89	− .31		
		5.	1.13	5.	1.30	− .17		
		6.	1.33	6.	1.57	− .24		
		7.	.83	7.	1.29	− .46		
		8.	1.03	8.	.89	+ .14		
		9.	1.02	9.	1.06	− .04		
		10.	1.00	10.	.98	+ .02		
							.86	1.06

TABLE 2—Continued

AREA		Avg. Item Score, Ky.		Avg. Item Score 6 States	Diff. of Item Scores	Avg. Area Score, Ky.	Avg. Area Score 6 States
SWIMMING:	Item:	1.	.05	Item: 1. .07	− .02		
		2.	.12	2. .07	+ .05		
		3.	.11	3. .08	+ .03		
		4.	.15	4. .10	+ .05		
		5.	.15	5. .10	+ .05		
		6.	.15	6. .10	+ .05		
		7.	.15	7. .10	+ .05		
		8.	.11	8. .08	+ .03		
		9.	.12	9. .09	+ .03		
		10.	.15	10. .04	+ .11		
						.13	.08
SUPPLIES:		1.	1.98	1. 1.78	+ .20		
		2.	1.12	2. .56	+ .56		
		3.	1.45	3. 1.55	− .10		
		4.	.56	4. .74	− .18		
		5.	.83	5. .79	+ .04		
		6.	.73	6. .80	− .07		
		7.	1.79	7. 1.60	+ .19		
		8.	.33	8. .52	− .19		
		9.	1.94	9. 1.04	+ .90		
		10.	1.51	10. 1.91	− .40		
						1.22	1.13

TABLE 2—Continued

AREA		Avg. Item Score, Ky.	Avg. Item Score 6 States	Diff. of Item Scores	Avg. Area Score, Ky.	Avg. Area Score 6 States
MEDICAL:	Item: 1.	1.59	Item: 1. .86	+ .73		
	2.	1.11	2. .94	+ .17		
	3.	1.20	3. .62	+ .58		
	4.	1.95	4. 1.18	+ .77		
	5.	1.85	5. .55	+ 1.30		
	6.	.39	6. .22	+ .17		
	7.	1.27	7. 1.03	+ .24		
	8.	.77	8. 1.13	− .36		
	9.	2.63	9. 1.23	+ 1.40		
	10.	2.30	10. 2.23	+ .07		
					1.50	1.00
CORRECTIVE:	1.	.04	1. .02	+ .02		
	2.	.07	2. .02	+ .05		
	3.	.06	3. .02	+ .04		
	4.	.06	4. .03	+ .03		
	5.	.02	5. .02	.00		
	6.	.02	6. .02	.00		
	7.	.07	7. .02	+ .05		
	8.	.11	8. .05	+ .06		
	9.	.07	9. .03	+ .04		
	10.	.14	10. .04	+ .10		
					.07	.03

TABLE 2—Continued

AREA		Avg. Item Score, Ky.		Avg. Item Score 6 States	Diff. of Item Scores	Avg. Area Score, Ky.	Avg. Area Score 6 States
ORG. PROGRAM							
	Item: 1.	2.52	Item: 1.	2.52	.00		
	2.	1.62	2.	.77	+ .85		
	3.	1.05	3.	1.41	− .36		
	4.	.93	4.	.84	+ .09		
	5.	1.80	5.	2.23	− .43		
	6.	2.05	6.	.94	+ 1.11		
	7.	.88	7.	.70	+ .18		
	8.	1.79	8.	1.90	− .11		
	9.	1.77	9.	.99	+ .78		
	10.	.62	10.	.45	+ .17		
						1.5	1.3
ORG. ATHLETICS:							
	1.	.92	1.	.32	+ .60		
	2.	.92	2.	.75	+ .17		
	3.	.98	3.	1.36	− .38		
	4.	.95	4.	.68	+ .27		
	5.	1.15	5.	1.10	+ .05		
	6.	.52	6.	1.06	− .54		
	7.	1.80	7.	1.99	− .19		
	8.	1.60	8.	1.55	+ .05		
	9.	2.40	9.	2.32	+ .08		
	10.	1.97	10.	2.12	− .15		
						1.3	1.3

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