

Commonwealth of Kentucky

EDUCATIONAL BULLETIN

THE STATUS OF HEALTH AND
PHYSICAL EDUCATION IN THE
SECONDARY SCHOOLS
IN KENTUCKY (1945-46)

by
CLARENCE HODGES WYATT



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FOREWORD

Healthful living in the home, community, and school is the chief objective of a health and physical education program. It has been possible to set up a division of health education in the Department of Education. This division is beginning its third year. A liberal grant from the W. K. Kellogg Foundation over a two-year period beginning in 1944 has enabled us to make notable progress. The program began with an experiment. This experiment involved the answer to the problem of how to get the health program under way rapidly and effectively. To answer this question in part, health coordinators were employed in several counties through assistance from the W. K. Kellogg Foundation funds. This experiment showed that rapid progress can be made in improving health and health teaching if there is a person employed to coordinate the health education in a given area.

Mr. Hambleton Tapp, Director of the Division of Health Education, has had the supervision of the health program for the past two years. He has been alert to the opportunities for advancing the health program. Under his stimulation and cooperation, Mr. Clarence Hodges Wyatt studied the Status of Health and Physical Education in the Secondary Schools in Kentucky. He advised Mr. Wyatt in preparing the questionnaires. He sent them to the high schools and gave cooperation in every way.

This bulletin contains the results of Mr. Wyatt's study. It is published because it gives us a picture of the health and physical education programs in the secondary schools of the state. The study has been adapted to the needs of the Educational Bulletin by Dr. Jagers and Mr. Tapp.

JOHN FRED WILLIAMS

August 1946

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INTRODUCTION

By
HAMBLETON TAPP, Director
Division of Health Education

Before effective steps can be taken in improving health and physical education in Kentucky schools, information concerning existing conditions should be at hand. No one can with reasonable certainty determine which way he should go until he knows where he is. The purpose of a study of the Status of Health and Physical Education in the Secondary Schools of Kentucky¹ was, in the main, to discover where we stand. Another purpose, of course, was to ascertain in what direction the facts should lead us in any program for the improvement of healthful living and wholesome recreation.

Mr. Clarence Hodges Wyatt chose this problem as the problem for a master's thesis at the University of Kentucky in 1945-46. He has completed his work, under the direction of Professor Chas. W. Hackensmith and Professor M. E. Potter, on this problem and has given the Department of Education the privilege of publishing it as Educational Bulletin for this month. Chapter I has been omitted since it gives only the background.

Mr. Wyatt used the questionnaire method in gathering his information upon which his analysis of the problem is based. The questionnaire was sent to all the high schools in the state. Not all the high schools responded but an unusually large number did respond. The study shows that 484 questionnaires were returned, representing 71.8 per cent of the high schools. This gave the author sound basis for drawing conclusions which may be considered valid. About 225 questionnaires were returned within two weeks from the time they were sent.

While only 71.8 per cent of the schools returned the questionnaires, they represented a total of 94,869 high school pupils, or approximately 76.3 per cent. The questionnaires came from 115 of the 120 counties.

Says Mr. Wyatt in his introduction: "This study is concerned primarily with physical education and health education as regularly scheduled subjects in the high school curriculum. It recognizes intra-

¹ Wyatt, Clarence Hodges, *The Status of Health and Physical Education in the Secondary Schools of Kentucky (1945-46)* Master's Thesis, University of Kentucky, 1946.

mural and inter-school athletics as desirable phases of physical education, but it does not accept them as *the* program." In concluding his introductory chapter, Mr. Wyatt says that, "no attempt is made in this study to outline a program of health and physical education for the high schools of the state; however, the deficiencies of our present program will suggest certain remedial measures, which will be pointed out as the discussion [facts] seems to warrant."

This is a detailed study of conditions as they exist. It should be used as a guide in the further study of conditions in individual schools and school systems. It tends to bring into bold relief how far our health and physical education programs fall short. It should stimulate an all-out effort to provide healthful living in the home, school and community, and cause us to take the problem seriously. It should stimulate us all to begin at once to provide conditions whereby a sane program of health and physical education in the high schools may be possible.

August 1946

BIOGRAPHICAL

The writer of this thesis, Clarence Hodges Wyatt, was born at Crawford, Kentucky, (Laurel County) June 21, 1900. He received his elementary education at Wyatt's Chapel, the one-room rural school of his home district. He graduated from Annville Institute High School, Jackson County, Kentucky, in 1928, and from Berea College with an A.B. degree in 1933. The years 1934-1941 were spent teaching in the high schools of Laurel County, Kentucky. During the year 1941-1942 he was athletic director of Sue Bennet College, London, Kentucky. From September, 1942, to October, 1943, he was employed as assistant athletic director of Berea College. During the next two years he served as an officer in the United States Naval Reserve and was released to inactive duty in December, 1945. He was enrolled in the Graduate School of the University of Kentucky in the summers of 1935, 1941, and 1942 and during the winter and spring quarters of 1946.

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THE STATUS OF HEALTH EDUCATION IN THE HIGH SCHOOLS OF KENTUCKY AS REVEALED BY QUESTIONNAIRE RETURNS

It is not the purpose to compare the health programs of the city, county, and private high schools of Kentucky: however, in tabulating separately the information from questionnaires returned by these three types of schools, certain differences were noted which the author felt would be interesting to cite. All tables, therefore, are set up to show returns in terms of city, county, and private schools; and striking discrepancies will be pointed out from time to time.¹ It is believed that such comparisons will help to give a clearer overall picture of the health program which is now being carried out in the high schools of Kentucky.

The present health education program

According to data compiled from questionnaires returned, 268 of the 484 schools responding, or 55.8 per cent, offer some form of health instruction; 190 teach health as a specific subject; 90 depend on integration with other subjects for health training; and 204 fail to provide a health education program. Of the 190 schools which teach health as a specific course in the high school curriculum, 121 offer it as an elective and 67 make it a requirement.²

When the returns of city, county, and private schools are examined separately, marked differences in the percentage requiring students to take health courses can be seen. Thirty of the one hundred and fifty-four city schools, or 19.4 per cent, indicated that health is a required course in their curriculum; thirty-two of two hundred and sixty-seven county schools, or 11 per cent, require their students to take health courses; while five of sixty-three private schools, or 8 per cent, make health education a required subject. In the percentage of city, county, and private high schools offering health education the difference is not as great as was true of the per cent requiring it. These percentages are: 56 per cent for the city schools; 51 percent for the county schools; and 61 percent for the private schools.

When health is included in the high school curriculum, it is most often taught in the junior year. The next most popular time

¹Four out of seven state schools returned questionnaires, separate tables were not set up for these, since data from such a small number of schools would not noticeably change the totals.

²See Table I.

Table I
DATA REGARDING THE HEALTH EDUCATION PROGRAM

	City	County	Private	Totals
No. of schools reporting	154	267	63	484
No. of schools providing health education	87	142	39	268
No. of schools teaching health as specific subject	61	111	18	190
No. of schools requiring health education	30	32	5	67
No. of schools offering health as an elective.....	30	77	14	121
Amount of credit given for health courses:				
One-half unit	29	58	10	97
One unit	22	50	7	79
Year health course is offered:				
Freshman year	25	21	4	50
Sophomore year	18	38	7	63
Junior year	33	64	7	104
Senior year	36	52	8	96
Source of subject matter used in health classes:				
Textbook	36	53	17	106
Environmental problems	5	7	1	13
Textbook and environmental problems.....	52	68	6	126
Devices used to facilitate instructions:				
Posters	57	77	12	146
Projects	47	60	11	118
Field trips	37	44	4	85
Plays	26	27	4	57
Visits to institutions	19	17	5	41
Movies	8	4	6	18

for offering the health course is the senior year.³ It is a common procedure in many high schools to alternate the health course between the junior and senior years. This practice is followed especially in the schools of the county where the faculty is often too small to permit the teaching of all the desired courses each year.

The amount of credit which is given for the health courses was supplied by 173 of the 190 schools that indicated health is taught as a specific subject. Ninety-five of the 173 give one-half unit, and 78 offer one unit. Two schools stated that two units could be earned in health courses.

In order to ascertain the source of material for health instruction in our secondary schools, this question was asked: "Is subject matter taken from textbook or from local environmental health problems?" From the 243 responses to this inquiry it was found that 126 teachers use both textbooks and local health problems as

³ See Table I.

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sources of material for their health instruction; 106 teach entirely from textbooks; and 13 use local environmental health problems altogether as a source of material. Over one-half of the 230 teachers who use health textbooks supplement them with health problems which concern the community in which the courses are offered.

The most common device used in the high schools for facilitating health instruction, according to checks on the returned questionnaires, is the poster. One hundred and forty-four teachers indicated that this visual aid was used in their schools. The health project is the next most frequently used device, being checked 118 times. Eighty-five instructors indicated that they take their health classes on field trips to water supply and sewage disposal plants. Plays, visits to institutions concerned with health, and movies were checked fifty-seven, forty-one and eighteen times respectively.⁴

This question was asked of the high school principals: "If health is not taught as a specific subject, is it integrated with other subjects?" It was checked "yes" on ninety of the four hundred and eighty-four questionnaires returned. A number of schools which offer health as a specific subject indicated that it is also integrated with other subjects. Altogether 163 schools reported that health is taught in connection with the biological sciences; 122 integrate it with natural sciences; 110 with physical education; and 92 with the social sciences. In a few instances home economics and Christian Doctrine were listed as subjects through which health lessons are taught.

The health education staff

An unsatisfactory number of answers was given to the question: "How many college hours of health education does your teacher of health have?" Thus the information regarding the academic qualifications of the high school health teachers is incomplete. It is assumed that the information necessary for answering the above question was not readily available to the persons filling out the questionnaires, so the information was not supplied. Among the ninety-seven health teachers whose hours in health education were listed there are nineteen majors, eleven minors, and sixty-seven with miscellaneous hours in health education, usually ranging below ten. *Enough data are available to reveal the fact that health, when it is offered in the high schools, is taught largely by teachers who do not have majors or minors in that field.*

⁴ See Table I.

Table II
INFORMATION REGARDING HEALTH PROGRAM AND STAFF

	City	County	Private	Totals
No. of schools reporting	154	267	63	484
No. of schools listing the number of college hours teacher of health has in health education.....	46	41	10	97
No. of health teachers with majors in health education	6	9	4	19
No. of health teachers with minors in the field of health education	6	5	0	11
No. of schools reporting health counselors	57	92	22	171
No. of schools with a faculty member designated as a health counselor	22	22	15	59
Subjects health education is integrated with in the high schools listed according to frequency:				
Biological sciences	64	78	21	163
Natural sciences	51	55	16	122
Physical education	46	43	21	110
Social sciences	37	41	14	92

The school health services

It is evident from the information supplied by the 484 questionnaires returned that the high schools are sadly lacking in health services for their students. In over 75 per cent of the secondary schools covered by this survey, students are not given, or required to have, physical examinations at any time during their four years of high school enrollment. This neglect is greatest in the county high schools where only fifty-seven out of two hundred and sixty-seven, or 21 per cent, reported health examinations were given all students. Forty-four of one hundred and fifty-four city high schools, or 29 per cent, have examinations required of all their students; and in the private schools this percentage is 28 per cent. Most of the schools which do provide physical examinations for their students report that examinations are followed up and parents are notified of findings and recommendations.⁵

The services of a city or county health department are available to nearly all of the high schools. Only twenty-five out of three hundred and fifty-three schools, or 7 per cent, which answered the question "Does your school have available the services of a county or city health department?" indicated they do not have access to such

⁵ See Table III.

services. A check with the State Department of Health revealed that sixteen counties in Kentucky do not maintain health departments. "But this is not as good as would appear on the surface. . . . Even among the 104 counties which do have such organizations, the majority have thus far been able to provide only skeleton services because of limited personnel and facilities."⁶

Table III
MISCELLANEOUS DATA REGARDING THE HEALTH EDUCATION PROGRAM IN THE HIGH SCHOOLS OF KENTUCKY

	City	County	Private	Totals
No. of schools reporting	154	267	63	484
No. of schools providing physical examinations for all students	44	57	18	119
No. of schools following up physical examinations	40	39	13	92
No. of schools which notify parents of findings and recommendations of the physical examinations	44	55	16	115
No. of schools having available the services of a county or city health department	121	180	27	328
No. of schools with an equipped medical room.....	27	14	14	55
No. of schools reporting the need for an equipped medical room	80	128	20	228
No. of schools that reported no need for an equipped medical room	36	47	13	95

Comparatively few of the high schools covered by this survey have a designated health counselor on the faculty. One hundred and twelve of the one hundred and sixty-nine responding to the question "Who is your health counselor?" listed the county health doctor or nurse. Personnel on the faculty most infrequently listed as health counselors are the physical education teacher, health teacher, the home economics teacher, the coach, and the principal.

Three hundred and forty-seven schools answered the question "Does your school have an equipped medical room?" Fifty-five of this three hundred and forty-seven indicated that their schools have an equipped medical room, while two hundred and ninety-two said they do not have such a room. Two hundred and twenty-eight of this three hundred and forty-seven, or 65.7 per cent, felt that an

⁶ Committee for Kentucky. *A Report on Health*. 1945.

equipped medical room is necessary and ninety-five, or 34.3 per cent, could see no need for one.

Opinions of high school principals regarding the importance of health education

The following four questions of opinions regarding health education were asked of the high school principals: "Do you believe that health education is as important as other subjects, such as English?" "Do you believe that a relationship exists between Kentucky's low health rating and her lack of health education?" "Do you believe that every county board of education should employ a full time Director of Health Education?" "Do you believe that every physically fit child should be required to take some form of physical and health education each year of school attendance?" Tabulation of the answers to these questions is shown in the table on the following page. *That our high school principals recognize health education as a very important subject is evident from the large number of affirmative answers to the above questions. Three hundred and seventy-six out of three hundred and eighty-seven, or 97.1 per cent, feel that health education ranks in importance with the traditionally required subjects of the high school curriculum; three hundred and seventy-five out of three hundred and seventy-nine, or 99 per cent of the total number answering to the question think that a relationship exists between Kentucky's low health rating and her lack of an effective health education program; three hundred and fourteen out of three hundred and forty-eight, or 90.2 per cent, consider health education important enough to warrant the appointment of a Director of Health Education by every county board of education; and three hundred and eighty out of three hundred and ninety-four, or 96.4 per cent, believe that health and physical education should be required each year of school attendance.*

Outstanding health problems in the secondary schools as seen by the high school principals

Responses to the question "What is the biggest health problem in your school as you see it?" were numerous, varied and revealing. Answers to the above question are classified and summarized in the table on the following page, but the writer feels that it will contribute greatly to the reader's understanding of the wide scope of the health problem in our high schools if a number of these answers is quoted from the questionnaires. The listings below are in no particular order:

"Lack of adequate toilet and hand washing facilities."

"Lack of qualified teachers for teaching it [health]."

"An obsolete building except for a gymnasium which is seldom used outside the basketball season. Rooms are too small, lighting is poor, and one building is infested with rats, mice and roaches. We have tried many things to rid the school of these pests but they come again and again. Our pit toilets are not kept in a sanitary condition. Most rooms are too small and heated with stoves making it impossible to keep them at the right temperature and properly ventilated."

"Lack of inside toilets and washrooms. Also the lack of showers."

"Lack of physical education or health education."

"Educating for proper care of contagious diseases in the homes."

"Toilets and water."

"Undernourished students."

"Getting children to eat a balanced diet."

"Diet, lack of sufficient health check-ups and insufficient personnel."

Table IV
TABULATION OF ANSWERS TO FOUR QUESTIONS REGARDING
HEALTH EDUCATION

	City	County	Private	Totals
Do you believe that health education is as important as other subjects, such as English?				
Yes	127	208	41	376
No	3	5	3	11
Do you believe that a relationship exists between Kentucky's low health rating and her lack of health education?				
Yes	123	213	39	375
No	1	1	2	4
Do you believe that each county board of education should employ a full time director of health education?				
Yes	98	182	34	314
No	15	15	4	34
Do you believe that every physically fit child should be required to take some form of physical and health education each year of school attendance?				
Yes	129	205	46	380
No	2	9	3	14

Table V
**SUMMARY OF ANSWERS TO THE QUESTION WHAT IS THE
 BIGGEST HEALTH PROBLEM IN YOUR SCHOOL AS YOU SEE IT***

Classification of Answers	No. of Answers Per- taining to Each Classification	Per Cent of Total Answers
Lack of proper facilities and equipment.....	71	41.3%
Malnutrition and improper diet	61	35.4
Sanitation	47	27.0
Lack of effective health instructions	40	23.0
Lack of physical examinations with follow-up program	31	18.0
Insufficient number of trained personnel	29	16.7
Contagious diseases other than colds.....	24	13.9
Lack of proper exercise and recreation	24	13.9
Common colds	23	13.3
Poor teeth	20	11.6
Personal cleanliness.....	20	11.6
Defective vision	16	9.1
Indifference of parents	14	8.5
Undesirable home environment	13	7.5
No problem	8	4.6

“To get parents to do something about their children’s health when recommendations are given by the county health department.”

“Common colds.”

“No washrooms, no modern toilets, doors and windows not screened, no provision for hot lunches, and lack of dental and eye clinics.”

“We can’t get parents to give their children breakfast on school days. There is a grave lack of teeth, eye and body care.”

“Contagious diseases such as scabies, and neglected teeth and eyes.”

“Posture, care of teeth and cleanliness.”

“Sanitation.”

“Poor water facilities and outdoor toilets.”

“Outdoor toilets.”

* One hundred and seventy-two schools supplied answers to this question.

- "Getting all teachers to stress the importance of health."
- "More facilities needed for health instruction; more frequent visits and closer checks by the health department."
- "Lack of proper facilities for a physical education program for all the students."
- "Personal cleanliness, nutrition, and home sanitation."
- "Lighting, toilets and water."
- "Lack of stress on health, inadequate rest room facilities and a physical education program."
- "Lack of a full time athletic director."
- "Sanitary facilities, washrooms, clean lunchrooms, etc."
- "Adequate shower and locker facilities and a full program of physical education with corrective classes for the handicapped."
- "The biggest health problem in this particular community, as I see it, is the improvement of the home conditions."
- "None."
- "Toilet facilities, heating system and luncheon space."
- "Colds."
- "The problem of proper nutrition."
- "Tuberculosis among the children."
- "Posture."
- "Lack of outdoor exercise and physical examinations with a follow-up program."
- "Common colds."
- "Proper diet and proper expenditure of surplus energy."
- "Lack of facilities for health training and general cleanliness of school and pupils."
- "Poor posture and bad teeth."
- "We need modern toilets, showers, washrooms, as well as adequate disposal of the sewage from our lunchroom."
- "Physical examinations for pupils."
- "Colds from riding on buses and sitting in crowded, poorly heated and improperly ventilated school rooms."
- "Sanitation and improper lighting facilities."
- "Toilet facilities."
- "Ignorance of the value of good health on the part of parents and students."
- "More health training for our teachers."
- "We need indoor toilets and adequate wash basins. Also check-ups on students by a doctor or nurse."
- "A medical room and a room for girls equipped for rest and relaxation."

"Need of health examinations."

"Developing health consciousness on the part of the students."

"Cleanliness, wholesome food, recreation and proper health habits."

"Athlete's foot, proper sex education, and care of colds."

"Poor teeth, poor eyes and an alarming number of cases of tuberculosis."

"Teeth care."

"Common cold."

"No problem which we are not well able to meet."

"The common cold which is the principal cause of absences."

"Poor eyes and teeth."

"Eyesight and posture."

"Lack of a physical education director."

"Lack of county health department."

"Lack of showers and indoor toilets."

"Students go to the doctor and think about their health only when they are very sick. There is no real appreciation of prevention and routine rules of health. Classroom work is theoretical and not properly adapted to the needs of the students."

"No major health problem."

"The common cold."

"Frequency of colds and lack of exercise, especially on the part of the girls."

"Lack of adequate examination of the children by the health department. There is no check made of the eyes, ears, nose, heart, lungs—nothing!"

"Lack of funds to carry on a well-rounded health education program."

"Health education does not reach far enough."

"Parents failing to see the importance of the health program."

"Lack of sufficient physicians to examine pupils and to follow up on the findings."

"Lack of trained health teachers and public indifference."

"Lack of health examinations."

"Lack of finance and teachers."

"The lack of a physical education program and the facilities for carrying on such a program."

"Insufficient time, trained personnel and equipment are available for the carrying on of a specific health program for all the pupils. There is almost a complete lack of medical, dental and public health nursing services for the pupils in this school. There is no course to

teach the present students how to do a better job of rearing their children in the future."

"The homes from which the children come are not clean and because we have no facilities in the school for cleaning them they are dirty most of the time."

"To get students to practice the rules of health learned in health classes."

"Good physical education program."

"Children who come from poor homes."

"We need more wash basins, an equipped medical room, a lounge, and a part time nurse."

"Rest rooms."

"Wholesome food, proper rest, sleep, and physical training."

"Teeth."

"Malnutrition."

"Proper food; eye care."

"Lack of qualified teachers and proper facilities."

"Outdoor toilets."

"Lack of doctor services."

"No big problems."

"Intestinal parasites among students, and sanitation, cleanliness, and proper seasonal clothing."

"Lack of toilets and hand-washing facilities."

"A better follow-up program for correction of physical defects."

"Lack of physical examinations and a course in health education."

"Qualified teacher whose main interest is health education. One nurse could handle the three junior high schools."

"No physical examinations, no means to correct known defects, lack of cooperation from the medical profession, and lack of adequate playground space and equipment."

"Organized physical education program with an instructor for both boys and girls."

"Diet and cleanliness."

"Undernourishment, poor teeth and poor eyesight."

"Lack of sanitation facilities such as soap, paper, towels, etc. We also need more drinking fountains to accommodate the students."

"Poor home conditions give rise to most difficulties. There is a great need for dental clinics. Physical education needs to be developed as a part of the school program."

"Necessary money and trained personnel to carry on a health program."

"1. Proper diet. 2. Control of contagious diseases. 3. Correction of teeth and eye defects."

"Lack of facilities and instructors for organized health classes."

"No outstanding problems but our physical education department should be strengthened."

"To get high school pupils to practice health rules learned in elementary school, and to impress on them the health advantages of a clean body and clean surroundings."

"Proper eating habits."

"Trying to put across to parents and children the importance of following up physical examinations."

"Prevalence of tuberculosis in Bourbon County."

"Eye defects, throat ailments, and communicable diseases."

"Better lavatories and toilets."

"Drinking."

"Eye defects and poor posture both of which we are trying to remedy. Our school has purchased four pair of glasses for near-sighted pupils this year."

"Proper sanitation."

"Lack of instruction in physical and health education and lack of facilities for such instruction."

"Lack of a gymnasium and playground space."

"Common colds."

"No problems."

"Fixtures in toilets and shower rooms are old and need to be replaced."

"Lack of sanitation in toilets and lavatories."

"Lack of adequate health examinations."

"Bad teeth and malnutrition."

"Lack of adequate facilities for washing hands before eating."

"Outdoor toilets."

It is significant to note the number of above quotations which begin with the word "lack." The paramount health problem in the high schools as it is depicted by the teachers who are on the scene is LACK—lack of adequate school buildings, lack of properly trained teachers, lack of funds, lack of health examinations, lack of a follow-up program, lack of indoor toilet facilities, lack of showers, lack of locker rooms, lack of luncheon space, lack of playground space, lack of proper diet, lack of cooperation from the medical profession, and lack of appreciation on the part of parents of the importance of health education. Shortcomings in so many aspects of the health program pre-

clude the offering of effective health training to the students in the high schools of our state.

Lack of facilities

As shown in the summary of the 172 responses to the question, "What is the biggest health problem in your school as you see it?" *Lack of facilities and equipment is considered the greatest obstacle to the carrying out of a satisfactory health program.*⁷ Seventy-one out of one hundred and seventy-two respondents listed lack of facilities or equipment as the biggest health problem in their schools. From an analysis of the answers to the above question, it is clear that the needed facilities and equipment not only pertain to those items essential for better health instruction, but also to those needed to provide healthful living conditions for the students while they are at school, such as properly heated and ventilated class rooms, adequate toilet facilities, adequate supply of good drinking water, adequate luncheon space and handwashing facilities. *In a number of instances it is indicated that better facilities are required if attending school is not to be an actual hazard to the student's health!*

Lack of sanitation

The frequency with which quotations such as "lack of inside toilets," "no modern toilets," "outdoor toilets," and others pertaining to lack of toilet facilities appear among those listed suggests the number of high schools that do not have adequate toilet facilities. This problem is especially acute in many county high schools which, because of their location, do not have access to a water and sewerage disposal, necessary for the installation of inside toilets. The outdoor pit toilets to which some schools must resort are permitted to reach such a degree of filthiness that their use is prohibited.

Malnutrition and improper diet

Sixty-one of the one hundred and seventy-two respondents listed malnutrition and improper diet as a big health problem in their schools. It cannot be determined from the information available to just what extent this reported malnutrition among high school students can be attributed to lack of proper instructions in the choice of food, but certainly lack of such training is a contributing factor to this prevalence of undernourishment.

Other health problems in our high schools recognized as significant by the principals of the several schools reporting follow in the order of the frequency with which they were listed: sanitation, lack

⁷ See Table V.

of effective health instruction, insufficient number of trained personnel, contagious diseases other than colds, lack of proper exercise and recreation, common colds, poor teeth, personal cleanliness, defective vision, undesirable home environment and indifference of parents. Eight schools reported that they had no health problems they were not prepared to meet. Table V gives the number and per cent of total answers for each type of health problem listed. A review of the list of health problems reported indicates the difficulties to be overcome.

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SURVEY OF FACILITIES AND EQUIPMENT FOR PHYSICAL EDUCATION

As was stated at the beginning of Chapter I, this investigation was not intended to be a comparative study of the health and physical program in the city, county, and private high schools; in tabulating returns, marked differences were apparent in some phases of the programs of these three types of schools. The tables in this chapter are set up to show returns from city, county, and private schools and striking differences will be commented on when the author feels a comparison will give a clearer picture of the whole program.

Facilities available for conducting high school physical education program

Four hundred and eighty-four high schools reported the possession of three hundred and ninety-five gymnasiums, of 81.6 per cent. Of 154 city high schools, 131, or 84.4 per cent, have gymnasiums; 228 out of 267 county high schools own gymnasiums, a total of 85.3 per cent; and 36 of the 63 private schools have gymnasiums, or 57.0 per cent. A marked difference is noted here in the percentage of private schools which own gymnasiums. This discrepancy can largely be attributed to the fact that private schools could not take advantage of the federal aid which was available to the city and county schools through the Public Works Administration. During the five year period from 1935 to 1940, 154 gymnasiums were completed in our city and county high schools while only 2 private schools reported the construction of gymnasiums during that period.¹ If we subtract from the 131 city gymnasiums the total reported for this survey, the 46 which were built with aid, the percentage of city schools with gymnasiums then would be 55 per cent, or 2 per cent less than the percentage of ownership reported by the private high schools; and, if we subtract from the 228 county gymnasiums the 105 that were built with federal aid, the percentage of county high schools with gymnasiums would be reduced to 48 per cent, or 9 per cent below the private school level. Finally, by subtracting from the 395 gymnasiums (the total number owned by the 484 schools which returned questionnaires) the 151 which were built with federal aid, the percentage would drop from its present total of 81.6 per cent to 52.5 per cent. It

¹ See Table VI.

Table VI
DATA REGARDING KENTUCKY HIGH SCHOOL GYMNASIUMS

	City	County	Private	Totals
No. of schools returning questionnaires	154	267	63	484
No. of schools with gymnasiums	131	228	36	395
No. of schools with no gymnasiums.....	23	39	27	89
Date gymnasiums were completed:				
Before 1920	8	3	6	17
1920-1925	17	9	4	30
1925-1930	44	48	8	100
1930-1935	12	33	7	52
1935-1940	53	101	2	156
1940-1945	3	26	2	31
No. of gymnasiums built with federal aid	46	105	0	151
No. of gymnasiums without locker rooms	21	74	7	102
No. of gymnasiums without shower rooms	5	53	9	67
No. of gymnasiums with substandard floors	8	25	4	37
Playing courts marked off on gymnasium floors:*				
Basketball courts	131	225	35	391
Volleyball courts	76	66	16	158
Badminton courts	38	15	9	62
Handball courts	12	8	3	23
Uses made of gymnasiums by the high schools:				
Basketball games	134	217	28	379
Auditorium	72	176	18	266
Physical education classes	88	105	18	211
Recreation center	65	120	18	203

cannot be concluded that none of the gymnasiums which were built with federal aid would have been constructed had such aid not been available. But certainly the number of them would not have been undertaken except for the opportunity provided by the Public Works Administration.

The lack of a gymnasium is essentially a problem of the small high school. Only ten of the eighty-nine schools which reported no gymnasium have an enrollment of more than a hundred. The percentage of high school students which have access to gymnasiums therefore is higher than the percentage of schools that have gymnasiums (81.7 per cent).

Many of our gymnasiums are not designed for the accommodation of physical education classes. One hundred and two of the three hun-

* A few schools mentioned shuffleboard and tennis courts.

dred and ninety-five gymnasiums, or 26 per cent, were reported as having no locker rooms; and sixty-seven, or 17 per cent, were without showers. Sixteen per cent of the city gymnasiums, 25 per cent of the private gymnasiums, and 32.4 per cent of the county gymnasiums do not have locker rooms. *Seventy-nine per cent of the gymnasiums that do not have shower rooms are in the county system.* Most of these gymnasiums do not have the essential facilities of locker and shower rooms were built within the last ten years.

Further evidence that many of our high school gymnasiums were not designed for physical education classes is the fact that they were constructed with regular class rooms at the side or underneath the main floor. A number of principals volunteered the complaint that they could not have physical education classes during school hours because of the distraction such classes would create for the students in adjoining rooms!

Thirty-seven of the three hundred and ninety-five gymnasiums have main floors smaller than the 74 by 42 dimensions which is the standard adopted by the National Rules Committee for junior high school basketball courts. It would be encouraging if one could point out that the existing small gymnasiums were structures built early in the last century. Alas, such a statement cannot be made truthfully. Many of our newest gymnasia contain main floors too small to permit the marking off of a standard basketball court. End lines for many of these undersized courts are drawn only inches from jagged stone walls or low stage fronts which makes every driving attempt for a "lay-up" shot in a basketball game a threat to the player's safety.

Basketball is the preeminent gymnasium sport. Two hundred and twenty-two of the three hundred and ninety-five gymnasiums have only basketball courts marked off on the playing floor. One hundred and fifty-eight gymnasiums, according to checks on the questionnaires returned, have volleyball courts; sixty-three have badminton courts; and twenty-three have handball courts.

In checking the uses made of their gymnasiums, 379 respondents marked "basketball games;" 266 checked "auditorium"; 211 checked "physical education classes"; and 203 indicated that their gymnasiums were used as community recreation centers.² Especially in the county schools is it customary for the gymnasium to be used as an auditorium. In fact, the gymnasium is frequently constructed with a stage.

Convincing evidence that the high schools are not fully utilizing their facilities for physical education is the fact that gymnasiums are being used on the average of only four hours a day.

² See Table VI.

In the county high schools, in fact, the average is only three hours. Hour after hour the gymnasiums of our schools stand idle, silent witnesses to our lack of provision for the needs of the students these structures should help to supply.

Four hundred and five of the four hundred and eighty-four schools which returned questionnaires in this survey, or 83.6 per cent, indicated that their students have access to a playfield; three hundred and eighty-one own playfields; while seventy-nine are without this essential facility.³ Eighty-nine of the four hundred and five playfields reported (21.9 per cent) were estimated by respondents to contain an area of one acre or less. It is doubtful if many of the persons filling out the questionnaires actually measured the dimensions of the playfield, which leads to the impression that area listed is a maximum guess. "To many the term 'acre' is but a vague unit of measurement; an acre equals 43,560 square feet; a regulation football field (the within-bounds space) contains 1.54 acres; a field 69.56 yards square equals one acre"⁴ However, discounting the vagueness in understanding the term "acre" and allowing for a certain amount of the inaccuracies in probable guesses, one may safely conclude that a large number of our high school playgrounds is too small to provide adequate playing space for the students who need to use them.

A large number of the high schools is part of a consolidation system in which elementary students use the same play area as the high school students.

Softball is the game most often seen in progress on the high school playing fields of Kentucky. This game was reported as a playground activity by 355 schools (73.3 per cent of the 484 returning questionnaires). Softball is played by 100 more schools than is baseball, the game mentioned the next highest number of times. Factors accounting for its popularity as a playground sport are the comparatively small space necessary for playing it, the small cost of the minimum equipment required, and the different levels of skill at which it can be executed and enjoyed. Not uncommon is it to see a game of softball in lively swing where the total available equipment consists of one loosely covered decrepit ball and an ancient, splintery, much bandaged bat. Baseball requires more playground space and equipment than many of the high schools can readily provide. It is played by 255 schools, or 52.5 per cent of the total number reporting. Volleyball, the next most frequently mentioned playground game, is played by 196 of the schools (40 per cent of the 484 covered by this

³ See Table VII.

⁴ Mable Lee, *The Conduct of Physical Education*, 1937.

Table VII
DATA REGARDING HIGH SCHOOL PLAYFIELDS

	City	County	Private	Totals
No. of schools reporting	154	267	63	484
No. of schools with access to playfields	128	230	47	405
No. of schools owning playfields	121	215	45	381
No. of schools without playfields	26	37	16	79
No. of schools with playfields of one acre or less ..	36	44	9	89
Activities carried on on playfields:*				
Softball	122	192	41	355
Baseball	85	144	26	255
Volleyball	52	108	36	196
Football	78	37	16	131
Tennis	32	50	19	101
Track	53	34	10	97
Soccer balls	20	7	9	36
Basketball	9	14	8	31
Speed balls	7	6	3	16

survey). Other outdoor games played by our high school students in the frequency with which they were mentioned are: football, played in 131 schools; tennis, played in 101 schools; track, an activity in 97 schools; soccer, played in 36 schools; basketball, played in 31 schools; and speedball, played by 16 schools. Other outdoor activities mentioned were: horseshoes, croquet, golf, marbles, badminton, and May Day programs.

Items of equipment reported

There is an old adage, "You can tell a carpenter by his tools." It is also true that the items of equipment owned by a school is indicative of the type of physical education program it conducts. However, this survey does not contain an inventory of the equipment of all the high schools in the state. The author felt that it would suffice for the purpose of this study to determine the types of equipment owned by the high schools as an index of what they offer in the way of physical education.

A glance at the table on the following page will show that five items of equipment are listed far more times than are any of the others. They are basketball, pianos, first-aid kits, softballs, and volleyballs, reported by 446, 375, 361, 344, and 308 schools respectively. After these five items, a marked drop to 209—the number of schools

* Other activities mentioned infrequently were: horseshoes, croquet, golf, marbles, badminton, and May Day programs.

listing baseball—is noted. Discounting pianos and first-aid kits, which are not a major part of the physical education program, items of equipment more commonly associated with physical education class material, such as mats, parallel bars, soccer balls, horizontal bars, boxing gloves, punching bags, medicine balls, and speed balls, are comparatively low in frequency. The author does not mean to imply that basketball, softball, and volleyball games are not included in physical education classes, but it is true that many schools which reported equipment for these games did not have a physical education

Table VIII
ITEMS OF EQUIPMENT REPORTED BY HIGH SCHOOLS

	City	County	Private	Totals
No. of schools reporting	154	267	63	484
No. of schools owning the following equipment:				
Basketball	149	252	46	447
Piano	122	207	48	375
First-aid kits	127	192	42	361
Softball	124	197	33	354
Volleyball	110	162	36	308
Baseball	79	105	25	209
Mats	85	74	14	173
Victrola	58	66	38	162
Ping pong	58	76	27	161
Boxing gloves	71	71	17	159
Football	80	38	15	133
Badminton	44	35	22	101
Medicine balls	30	24	8	62
Track	40	13	9	62
Soccer balls	34	12	9	55
Horizontal bars	19	27	8	54
Parallel bars	23	18	7	48
Archery	22	13	12	47
Handballs	14	18	12	44
Punching bags	19	13	5	37
Speed balls	9	4	4	17

program; whereas, few schools with mats, horizontal bars, medicine balls, etc., among their equipment failed to report a physical education program. It became a kind of game with the writer to look at the equipment list submitted by a school on the first page of the questionnaire and guess what the answer would be to the question, "Does your school have a physical education program (regularly scheduled classes in physical education)?" and almost invariably he could guess correctly. *The equipment list of a school reveals much regarding its program; the equipment list of Kentucky's high schools clearly indicates that the emphasis is on athletics rather than physical education.*

THE HIGH SCHOOL PHYSICAL EDUCATION PROGRAM

In this chapter the author will set forth from the information available pertinent facts regarding the present physical education program in our high schools with an analysis of the kind of program the high school principals feel should be inaugurated. Intramural and interschool activities will be discussed briefly as phases of the physical education program. A number of responses to the question "What changes would you make in your program if you had authority to bring them about?" will be quoted from the questionnaires because of the variety of attitudes and interests they express.

The perfect physical education program

Only 163 of the 484 high schools returning questionnaires indicated that they carry on a physical education program. This number is just over one-third (33.6 per cent) of the schools covered in this survey. The percentage of county high schools offering physical education is noticeably below that of the city and private schools.¹ Sixty-eight of the two hundred and sixty-seven county schools, or 25.4 per cent, teach physical education; whereas, in the city and private schools the per cent offering physical education is 43.5 and 44.4 respectively.

The number of schools requiring physical education is greatly below the number offering it. Only seventy-seven out of four hundred and eighty-four schools, or 15.9 per cent, make physical education a required subject. In the county schools this percentage is 7.8 per cent; in the city and private schools the percentage of requirement is 24.5 and 28.5 per cent in the order given.

Credit is given in eighty, or 16.5 per cent, of the four hundred and eighty-four schools reporting. Forty city high schools, 25.9 per cent, give credit; twenty-seven county schools, 11.1 per cent, give credit; and thirteen private schools, 20.6 per cent, give credit for an average of 16.5 per cent. When credit is given for physical education, the amount most commonly awarded is one-fourth unit a semester, permitting students to earn a maximum of two units. Approximately 80 per cent of the total number of schools supplying information regarding the amount of credit given for physical education listed one-fourth unit a semester; 16 per cent gave one-half unit a semester; and

¹ See Table IX.

Table IX
DATA REGARDING PHYSICAL EDUCATION PROGRAM

	City	County	Private	Totals
No. of schools reporting	154	267	63	484
No. of schools with physical education programs..	67	68	28	163
No. of schools requiring physical education	38	21	18	77
No. of schools giving credit for physical education	40	27	13	80
No. of years physical education is required:				
One year	5	1	1	7
Two years	8	8	2	18
Three years	14	1	1	16
Four years	11	14	10	35
No. of periods per week physical education classes are required to meet:				
One period	4	2	6	12
Two periods	29	21	10	60
Three periods	27	8	6	41
Four periods	2	3	3	8
Five periods	5	24	2	31
Length of physical education:				
30 minutes	2	2	3	7
45 minutes	27	33	14	74
50 minutes	11	4	3	18
55 minutes	8	3	0	11
60 minutes	17	18	5	40

the other 4 per cent combined credit for physical education with that of other subjects allowing odd fractions of a unit, such as one-eighth or one-fifth, for the part representing physical education.

Of the seventy-six schools marking the number of years physical education was required, thirty-five checked four years, eighteen checked two years, sixteen checked three years, and seven checked one year. Thus, when physical education is required in a school, it is most frequently required for all four years of the high school course.²

The physical education class is most often required to meet two periods a week. Sixty schools reported that classes meet twice weekly; forty-one, three times each week; thirty, five times weekly; twelve, one period weekly; and eight, four times a week.

The length of the physical education class period is not uniform for all the schools offering this subject, but the forty-five minute period is most commonly used. As shown in the table on this page, seventy-four schools use a forty-five minute period, forty, a sixty-minute period, eighteen, a fifty-minute period, eleven a fifty-five minute period, and seven, a thirty-minute period. If the number re-

² See Table IX.

porting fifty- and fifty-five-minute periods were estimating the amount of a sixty-minute period the students spend in class, then the sixty-minute period is the one most commonly used; however, the information asked for on the questionnaire was the length of the class periods, so the probability that the fifty- and fifty-five-minute periods reported were a kind of "portal to portal" estimate of the sixty-minute period cannot be substantiated from the information received.

Three types of activities stand out in the frequency of their inclusion in the high school physical education program. These activi-

Table X
DATA REGARDING PHYSICAL EDUCATION PROGRAM

	City	County	Private	Totals
No. of schools reporting	154	267	63	484
No. of schools requiring physical examinations prior to assignment to physical education classes	19	22	21	62
No. of schools with classes for handicapped	1	4	5	10
No. of schools requiring showers after activity classes	45	37	11	93
No. of schools furnishing towels and soap for students	24	19	11	54
No. of schools requiring uniforms for physical education classes	44	30	16	90
Activities included in physical education classes:				
Team games	67	64	28	159
Seasonal sports	67	54	28	149
Calisthenics	67	52	24	143
Gymnastics	42	35	18	95
Low-organization games	49	25	17	91
Tumbling	47	20	14	81
Rhythmical activities	34	25	16	75
Combatives	28	17	9	54
Individual field events	25	14	13	52
Individual track events	23	10	14	47
Self-testing activities	21	7	7	35
Factors considered in determining grade in physical education:				
Attendance	57	41	21	119
Effort	56	40	19	115
Cooperation	48	38	19	105
Conduct	43	39	19	101
Improvement	44	35	18	97
Skill tests	33	21	15	69
Posture	27	22	14	63

* A few schools indicated that attitude, sportsmanship, and leadership were considered in determining physical education grades.

ties are team games, seasonal sports, and calisthenics.³ Of the 163 schools with physical education programs, 159 checked "team games" as being included in their programs, 149 checked "seasonal sports" and 143 checked "calisthenics." The terms "team games" and "seasonal sports" are general, but from the equipment listed and other information supplied on the questionnaires it may be concluded that the team games often played are basketball, softball, and volleyball, and the seasonal sports referred to are softball and volleyball in the spring and fall and basketball during the winter. Other activities included in the physical education programs in the order of their frequency by number of schools are: gymnastics, ninety-five; low-organization games, ninety-one; tumbling, eighty-one; rhythmical activities, seventy-five; combatives, fifty-four; individual field events, fifty-two; individual track events, forty-seven; and self-testing activities, thirty-five.

A study of the adjoining columns of figures under "city" and "county" in the section "Activities included in the physical education classes" of Table X will reveal greater variety of activities that are included in the physical education programs of the city schools. These columns represent practically the same number of programs (sixty-seven city and sixty-eight county schools), yet without exception the number for an activity under "city" is larger than the corresponding number for the same activity under "county." Listing the figure for an activity in the city school programs first followed by the figure for the county school programs, the count is as follows: team games, sixty-seven and sixty-four; seasonal sports, sixty-seven and fifty-four; calisthenics, sixty-seven and fifty-two; gymnastics, forty-two and thirty-five; low-organization games, forty-nine and twenty-five; tumbling, forty-seven and twenty; rhythmical activities, thirty-four and twenty-five; combatives, twenty-eight and seventeen; individual field events, twenty-five and fourteen; individual track events, twenty-three and ten; and self-testing activities, twenty-one and seven.

A closer study of the column of figures under "county" and "private" in the section of Table X showing the activities included in the physical education program would be necessary before comparisons become meaningful, unless the numbers in the private school column be increased to represent a number of programs equal to that of the county. When such a calculation is made, comparative figures for the various activities listed giving the number representing the county programs first would read as follows: team games, sixty-four

³ See Table X.

and sixty-eight; seasonal sports, fifty-four and sixty-eight; calisthenics, fifty-two and fifty-eight; gymnastics, thirty-five and forty-three; low-organization games, twenty-five and forty-one; tumbling, twenty and thirty-four; rhythmical activities, twenty-five and thirty-nine; combatives, seventeen and twenty-two; individual field events, fourteen and thirty-one; individual track events, ten and thirty-four; and self-testing activities, seven and seventeen.

A study of the comparative figures in the two preceding paragraphs reveal the unfavorable position of the county high schools regarding the variety of their physical education programs. There is no appreciable difference in the variety of activities included in the city and private high schools.

Schools were asked to check the factors used in determining physical education grades from the following: attendance, effort, cooperation, conduct, improvement, skill tests, and posture. These returns were received attendance was checked 119 times; effort, 115 times; cooperation, 105 times; conduct, 101 times; improvement, 97 times; skill, 69 times; and posture, 63 times. A few respondents filled in the blanks provided under the factors suggested by the author attitude, sportsmanship, and leadership. It is apparent from the above tabulation that physical education grades for the most part are arrived at subjectively rather than through objective tests of physical skills.

Out of the 163 schools reporting physical education programs, 90 schools (or 55.2 per cent) require uniforms; 93 schools, or 57.2 per cent, require students to take showers after physical activity classes; and 54 schools, or 33.1 per cent, furnish towels and soap.

Sixty-two schools indicated that students are given physical examinations prior to assignment in physical activity classes. This number is only 38 per cent of the schools with physical education programs and 12.7 per cent of the total number of schools included in the survey.

Ten schools, 2 per cent of the total, hold corrective or special classes for handicapped students. *Only one city school out of one hundred and fifty-four has a class for the physically handicapped; four county schools out of two hundred and sixty-seven have such classes; and five private schools out of sixty-three provide special classes for those not able to participate in the regular program.*

The largest number of students reported in any physical education class is 110. Altogether there are sixty-nine classes with an enrollment of forty or more. The large class is almost exclusively the problem of the large school. A large high school is here taken to

mean one with an enrollment of 200 or over. *Over 70 per cent of the high schools of Kentucky have an enrollment of less than 200.*

One hundred and thirteen co-educational high schools admitted that girls are not provided with opportunities for taking physical education equal to those for the boys. Reasons listed for this lack of equal opportunity for girls in physical education, in the order of frequency, were: no teacher for girls; not enough time for scheduling classes for both boys and girls in one gymnasium; and lack of dressing facilities. Four schools indicated that girls' physical education is not considered as important as that of the boys'. *It is clear that most of the gymnasiums in the co-educational high schools were built primarily for the boys.*

The total number of physical education teachers reported by the 163 schools with physical education programs is 308.⁴ Of these 308

Table XI
MISCELLANEOUS DATA REGARDING PHYSICAL EDUCATION PROGRAM AND STAFF

	City	County	Private	Totals
Source of funds for purchase of physical education and athletic equipment:				
Receipts from athletic contests	107	183	12	302
Special programs and donations	17	67	13	97
Board of education	57	21	0	78
Parent-Teacher's Assoc.	16	52	3	71
Student fees	2	0	16	18
Information regarding physical education teachers:				
Total number of physical education teachers listed	154	106	48	308
No. of part time teachers of physical education	107	99	46	252
No. of full time teachers of physical education	47	7	2	56
No. of physical education teachers with majors or minors in physical education	91	44	21	156
No. of physical education teachers with graduate degrees in physical education	17	4	5	26
No. of physical education teachers having had experience on athletic teams	74	46	25	145
Dates schools began a physical education program:				
Before 1920	2	0	5	7
1920-1925	6	2	4	12
1926-1930	17	1	4	22
1930-1935	17	5	3	25
1935-1940	14	16	0	30
1940-1945	18	40	6	64

⁴ Coaches in schools which do not offer physical education are not counted as physical education teachers in this study.

teachers, 252 teach part time and 56 teach physical education altogether. As shown in the table on the following page, forty-seven of the fifty-six full time physical education teachers are employed in city high schools. One hundred and fifty-six of the three hundred and eight physical education teachers, 50.6 per cent, have majors or minors in the field; and twenty-six, or 8.4 per cent, have graduate degrees. One hundred and forty-five of these teachers on which data were given played on a varsity team in one or more sports.

A partial explanation of the lack of an adequate physical education program in the high schools of Kentucky may be found in the answers to the question "What are your chief sources of funds for the purchasing of playground and athletic equipment?" The source mentioned more times than all others added together was "receipts from athletic contests." Thus it is true that in a majority of the schools the athletic program must finance itself and furnish funds for purchasing equipment for the physical education program. Only seventy-eight times was the board of education mentioned as a source of funds for the purchase of playground and athletic equipment.⁵ More city boards of education appropriate money for physical education than do county boards. In the order of their frequency the source of funds for the purchase of playground and athletic equipment as listed by the schools were: receipts from athletic contests, 302; special programs and donations, 97; board of education, 78; Parent Teacher's Association, 71; and student fees, 18. In most of the schools the athletic contests which furnish funds for the purchase of equipment were basketball games.

It is encouraging despite the low percentage of schools which offer physical education (33.6 per cent) that more than twice as many programs were organized between 1940-1945 than there were during any other five-year period in the history of high school physical education in Kentucky. Perhaps the emphasis on physical fitness growing out of our participation in World War II was responsible for the beginning of physical education programs during this period; but when it is remembered that these programs were begun at a time when the teaching staffs had been reduced to a minimum because of service demands and when equipment was hard to obtain, the prospects for the inauguration of many more programs for the coming year are bright.

How far our present physical education program is from the kind our high school principals feel we should have may be ascertained

⁵ See Table XI.

from a study of the table on this page. Here it will be noted that 425 respondents indicated that physical education should be required for all high school students. Actually it is required in only 77 schools. Just twenty-one, 4.3 per cent of the number expressing an opinion, felt that physical education should not be required. It is clear that the paucity of the present physical education program in our high schools is not due to a failure on the part of high school principals to recognize its worth.⁶ The program recommended by the largest number of respondents is one that would be required for all high school students three days a week throughout the high school course.

Opinions regarding the number of periods per week physical education classes should be required to meet differed widely, but as

Table XII
MISCELLANEOUS DATA REGARDING PHYSICAL EDUCATION

	City	County	Private	Totals
No. of schools reporting	154	267	63	484
No. of schools reporting their physical education programs adequate	16	11	19	46
No. of schools reporting their physical education programs inadequate	116	225	33	374
No. of school principals who feel physical education should be required	141	235	49	425
No. of school principals who feel physical education should not be required	5	14	2	21
No. of periods principals feel physical education classes should meet:				
One period	3	7	2	12
Two periods	37	42	18	97
Three periods	52	80	6	138
Four periods	10	17	2	29
Five periods	34	54	10	98
No. of schools providing less physical education for girls than for boys	28	79	6	113
Reasons given for inequality of girls' program:				
No teacher for girls	10	59	5	74
Not enough time for accommodating both boys and girls in one gymnasium	14	41	3	58
No dressing facilities	12	37	2	51

⁶ The writer is assuming that the opinions on the questionnaires represent those of the principals to whom they were addressed. Quite a large number of the questionnaires was signed by the principals of the schools from which they were returned.

shown in Table XII three periods was recommended by the greatest number of respondents. Out of 360 recommendations 138 were for three periods per week; 97 were for two periods; 98 for five periods; 29 for four periods; and 12 for one period. It is interesting to note that the private schools would prefer to have physical education classes meet two periods per week rather than three periods, which is the choice of both city and county schools. Interesting, too, is the fact that the second choice of the county schools is a five-period schedule rather than a two-period schedule, which is the second choice when city, county, and private checks are added for a total.

Further evidence that there is an awareness on the part of high school principals of the need for a more adequate physical education program are the answers they gave to the question "Do you feel that your present physical education program is adequate for the needs of your students?" Only forty-six schools out of the four hundred and twenty checking this question, or 10.9 per cent, indicated that their programs were adequate. *Three hundred and seventy-four schools, 89.1 per cent, considered their programs inadequate.* A study of the forty-six questionnaires which were returned by the schools considering their programs adequate revealed the lack of uniformity of opinion as to what constitutes an adequate physical education program. For example, one school reporting its present plan as adequate listed these as embracing its physical education program: "A gymnasium containing four spacious locker rooms, three shower rooms, six shower heads, a large main floor with courts marked off for basketball, volleyball, badminton, and handball; a ten-acre playing field used for football, baseball, volleyball, softball, and tennis; equipment consisting of basketball, volleyball, baseball, badminton, archery, football, ping pong, softball, parallel bars, horizontal bars, medicine balls, boxing gloves, mats, piano, victrola, and first-aid kits; physical education activities including calisthenics, gymnastics, team games, rhythmical activities, individual field events, seasonal sports, self-testing activities, and individual track events; physical education classes required to meet five periods per week for sixty minutes a period; students required to have uniforms for class and take showers at the close of the period with towel and soap furnished; all students given physical examinations by a school nurse prior to assignment to physical activity classes, and special classes organized for the physically handicapped; classes taught by two part-time teachers (a man and a woman) with major or minor in physical education; an intramural program with six activities conducted with ninety-six of its one

hundred and fourteen students participating; and engaging inter-scholastically in basketball, football, baseball, and tennis."

Comparison of the above summary with that for another school reporting an adequate program is rather revealing. *For facilities* this school reported a gymnasium containing one small locker room, two shower rooms, two shower heads, a large main floor with courts marked off for basketball and volleyball; a four-acre playfield used for baseball, softball, volleyball, and tennis. Its equipment list consists of basketball, volleyball, softball and ping pong equipment, together with mats, piano, and first-aid kits. *The physical education program* includes five activities: calisthenics, gymnastics, team games, rhythmic activities, and seasonal sports. *Physical education classes* meet twice a week for twenty minutes, no uniforms are required, and showers are not permitted because of the scarcity of water. Two part-time teachers, neither of whom has a major or minor in physical education, are responsible for what this school has in the way of physical education. There is no intramural program, and in interschool competition only twenty boys take part. This note was written on the margin of the questionnaire by the principal of the school whose program is reviewed above: "For rural pupils, I believe our physical education program is adequate, for all of them work at home and, in that way, get enough exercise."

By comparing the physical education program of the two schools reviewed above, both of which were considered adequate by their principals, the vast difference in what an "adequate" program may represent is made clear.

Intramural and interschool participation

As stated in Chapter I, the nature of this work does not permit a detailed study of the intramural and interschool activities of the high schools. However, since intramural and interschool activities are phases of physical education, a status study of the high school physical education program would not be complete without ascertaining a few outstanding facts about the intramural and interschool programs.

One hundred and ninety-eight of the four hundred and eighty-four schools included in this survey (40.9 per cent) indicated that they sponsor an intramural program. The total number of students taking part in the 198 programs is 27,137, or 17.6 per cent of the total enrollment of the schools reporting. Of the 27,137 students participating in intramurals during a year, 15,490 are boys and 11,647 are girls. Thus in intramurals as in physical education work the boys are given better opportunities for participation than the girls.

The three chief activities of the intramural programs of the high schools are basketball, softball, and volleyball.⁷ Basketball was given as an intramural activity by 183 schools, or 92.9 per cent of the 198 which reported intramural programs; softball was included in 116 programs, or 56.5 of the total; and volleyball was listed as an intramural activity by 97 schools, or 48.9 per cent of the total number reporting programs. After volleyball the next most frequently mentioned activity of the intramural program is track, which was included in the programs of thirty schools. Tennis, touch football, and baseball were listed as intramural activities by twenty-two, twenty, and nineteen schools respectively. Other activities mentioned infrequently were: ping pong, horseshoes, shuffleboard, bowling, archery, golf, soccer, speedball, marbles, handball, and boxing.

Table XIII
DATA ON INTRAMURAL AND INTERSCHOOL PARTICIPATION

	City	County	Private	Totals
No. of schools reporting	154	267	63	484
No. of schools with intramural programs	75	89	34	198
Activities included in the intramural program:*				
Basketball	70	84	29	184
Softball	48	47	21	116
Volleyball	36	43	16	95
Track	11	7	12	30
Tennis	8	4	10	22
Touch football	13	2	5	20
Baseball	5	13	1	19
Interscholar sports engaged in by schools reporting:				
Basketball	131	207	31	369
Baseball	43	61	14	118
Football	66	22	9	97
Track	39	16	11	66
Softball	11	34	5	50
Tennis	10	3	8	21
Enrolling of schools reporting	48,815	38,656	6,584	94,869
No. participating in intramurals:				
Boys	10,021	4,392	1,077	15,490
Girls	7,549	2,594	1,504	10,647
Total	17,570	6,986	2,581	26,137
No. participating in interschool contests:				
Boys	5,554	4,994	1,258	11,806
Girls	387	754	508	1,649
Total	5,941	5,748	1,766	13,455

* See Table XIII.

* Other activities mentioned by a few schools are: ping pong, horseshoes, shuffleboard, bowling, archery, golf, soccer, speedball, marbles, handball, and boxing.

Interscholar contests provide opportunities for participation of 13,455 high school students during a year in the 484 schools covered by this report, or 14.1 per cent of the total enrollment of these schools. The low percentage of interschool participation suggests the need for a greatly expanded intramural program to provide opportunities for a larger number of students to engage in sports. In 26 successive numbers of schools, participation in sports for a majority of the students is limited to the stamping of the feet, clapping of the hands, and other physical expressions of approbation stimulated by the success of the school team.

Basketball is the game most frequently played between the high schools of the state. It is played interscholastically by more than three times as many schools as play baseball, the game used by the next highest number of schools. As shown in Table XIII, the order and frequency with which games are engaged interscholastically are: basketball, 369; baseball, 118; football, 97; track, 66; softball, 50; and tennis, 21. It is interesting to note that the order of activities in city, county, and private schools do not follow the same order as the order of totals. In the city column, football would follow basketball; whereas, in the county and private columns baseball follows basketball. More city schools engage in track than play baseball, but in the county schools baseball is favored over track by almost four to one. Volleyball, swimming, golf, boxing, and rifle were listed as interschool activities by twelve, seven, six, three, and one school respectively.

Changes principals would make in program

This question was asked the high school principal: "If you do not consider your physical education program adequate, what changes would you make if you had authority to bring them about?" A large number and variety of responses to this question was received. Since the answers represent a kind of on-the-scene diagnosis of the ills of the high school physical education program, a number of them is included in this manuscript. However, the replies are classified and tabulated in the table on the following page.

The quotations listed below are typical of the 290 received as answers to the above question.

"I would like to be in a position to employ a full-time athletic director who would set up a physical education program for the school."

"We plan to have a full-time teacher for physical education next year. Our program then will consist of regularly required classes for all students."

Table XIV
SUMMARY OF ANSWERS TO QUESTION CONCERNING CHANGES
IN PHYSICAL EDUCATION PROGRAM*

Classification of Answers	No. of Answers Pertaining to Each	Per Cent of Total Answers
Increase physical education personnel	155	52.4%
Inaugurate, or expand, physical education program	132	45.4
Increase facilities for physical education	108	37.2
Purchase more equipment for carrying on a fuller physical education program	63	21.7
Require physical education for all students	56	19.3
Give credit for physical education	26	8.9
Provide physical examinations for students before assigning them to physical education classes...	18	6.2
Provide classes for handicapped	11	3.7
No change	6	2.1

“More facilities, more instructors, and a fuller program.”

“Longer periods for physical education classes, classes meeting three times a week, and credit given.”

“Plans are under way for increasing our physical education program.”

“Remedial classes for the few that need them.”

“Provide physical education for both boys and girls at least three hours a week.”

“I would like for architects and boards of education to consult teachers about the construction of school buildings. In this school we have two showers for boys, two showers for girls, no lockers, toilets not connected with the gymnasium, hardly enough water to drink, one wash basin for 130 girls, one wash basin for 135 boys, and two drinking fountains for the 255! How could you expect an effective program!”

“Purchase additional equipment; make it available for all the students; and employ a full time director of physical education.”

“We plan to renew our former physical education program now that the war is over and materials are available.”

“Have regular scheduled classes, give credit, and have the program financed by the county board of education.”

* This summary represents 290 responses.

".....school has a work program of two hours each day which takes the place of physical education."

"I would first build a gymnasium. Next I would buy adjoining property to give additional playground space which is badly needed. I feel that every high school should have physical education with no less than three class periods a week devoted to it. The program should include girls as well as boys."

"Prohibit physicians from writing statements that certain pupils be exempted from physical education."

"Give physical education to both boys and girls at least three periods per week."

"Additional physical education teachers so that each pupil would have at least two periods of class work per week. I would require physical examinations for each student before scheduling them in physical education classes. I would also require health instruction for all students."

"1. Four year requirement of physical education. 2. Provision for physical examinations each year. 3. Provision for special classes. 4. Increase staff and facilities. 5. Smaller classes."

"None."

"I would like to install showers and require students to shower after each activity class. I would like to have adequate dressing rooms so as to permit changes into uniform for class work. I would require medical examination for all students. Also I would see that more time was devoted to the girls' program."

"Require physical education for graduation and provide adequate equipment for carrying on the program."

"Full time physical education program is planned for 1946-7."

"A little less emphasis on interschool basketball and more on physical education for all the students."

"Employ physical education instructor. Our present set-up requires the principal to take care of physical education, such as we have."

"Establish a good program in physical education. This is not practical now because of the lack of dressing facilities and showers."

"Full time physical education program with credit."

"More gymnasium space, more outside play space, more money for equipment, and more instructors to handle program."

"I would like to arrange for physical examinations for all, but there is no doctor in the county."

"More intramural and less interschool sports."

"Corrective classes under a trained specialist and longer periods."

"Create opportunities to work with smaller groups so as to permit the individual and corrective instruction necessary."

"Increased intramural program for both boys and girls, program for the physically handicapped, more careful physical examinations, provision for community participation in a recreation program."

"If I had sufficient teaching force I would schedule regular physical education classes and enlarge the intramural program."

The summary of the 290 responses to the question "What changes would you make in your physical education program if you had authority to bring them about?" reveals that the first change the largest number of principals would make if they could have their wish in the matter *would be the employment of physical education personnel necessary for carrying on a full physical education program*. "I would employ a full time physical education director" was the answer most frequently given to the above question.

Other changes principals would make in their physical education program, if they were in the position to effect them, follow according to the frequency with which they were mentioned: inaugurate or expand physical education, increase facilities for physical education, purchase equipment for the carrying on of a fuller program; require physical education for all students, give credit for physical education, require physical examinations for students before assigning them to physical education classes; and provide classes for the handicapped. Six out of the two hundred and ninety schools would make no change in their present programs.⁸

The above classification and summary of the answers to the question concerning changes desired in the physical education program is a kind of index to the high school principals' understanding of the weakness of the physical education program in their schools and an indication of the measures they feel should be taken to improve them. It is further evidence of the recognition by the principals of the need for a more complete program of physical education for students under their supervision.

⁸ See Table XIV.

ANALYSIS OF THE REPORTS

In the three preceding chapters of this thesis, numerous figures, percentages, tables, quotations, and statements pertaining to the status of health and physical education in the secondary schools of Kentucky have been considered and discussed. Just what do they all mean? How bright or how dark is the picture they portray? How hopeful or discouraging is the outlook?

The health picture

Perhaps the best way of evaluating our present position in high school health education is by comparing the program which is being carried out in Kentucky's high schools with the kind of program prominent leaders and organizations concerned with student health recommend as essential if student health needs are to be provided for adequately. Two recent and comprehensive reports serve as excellent standards with which to compare our program. They are "Health and Physical Fitness for all American Children and Youth," a joint report of the Educational Policies Commission and the American Association for Health, Physical Education, and Recreation and "Suggested School Health Policies," a report of the National Committee on School Health Policies, formed in 1945 by the National Conference for Cooperation in Health Education. These reports integrate the points of view of many professional men and groups as to what school health policies should be.

In facilities provided, amount of health instruction given, qualification of personnel, and health services maintained Kentucky's high schools fall far below the standards suggested in the above mentioned.

Thousands of Kentucky's high school students are housed in buildings that are poorly designed, inadequately equipped, improperly ventilated, unscreened, unsatisfactorily heated, ill-cleaned, and unfavorably located. The following description of conditions that exist in many American schools might well be a description of conditions in many of Kentucky's high schools:

Many school sights are hazardous. Lighting, heating, ventilation, and water supplies may be inadequate. Children occupy non-adjustable, ill-fitting seats. Toilet rooms and washrooms are insufficient or entirely lacking, and no clinic room is available for children who are injured or become ill. Lunch rooms are improvised in dark,

malodorous basements. Small, poorly surfaced school yards are poor substitutes for non-existent playrooms and gymnasiums. Many children attend schools whose appearance is drab and uninviting.¹

How far our schools fall short of adequate provision of facilities for healthful school living is apparent from a review of the following suggested standards:

Every school has a responsibility for providing a healthful environment; physical, social, and emotional. . . . Location of the school should be chosen with a view to ample space for buildings and grounds; to safety from accident hazards, especially traffic hazards; to freedom from noise; to cleanliness and to the provision of as good drainage as possible

Construction and maintenance of the school building should be in accordance with, or superior to, standards established by law and by building and health regulations. Important considerations are adequate size; appropriate ventilation, heating, lighting, and acoustics; adjustable seats with regard for postural considerations; attractive decorations; wide halls; stairways of fireproof construction; doors opening outward on automatic safety latches. Lavatories and hand-washing facilities should be adequate and accessible and of appropriate size for the children who use them. There should be an ample number of drinking fountains of approved sanitary design, and these should always be kept in good working order.

Indoor and outdoor gymnasiums, and outdoor play areas with necessary dressing, locker, and shower rooms, and—ideally—swimming pool facilities, should be available. . . . There should be adequately planned and equipped health service rooms, and separate isolation and rest rooms for boys, girls, and teachers"²

One needs only to drive through the streets of our cities or along our highways to discover many high school buildings whose type of construction and choice of location preclude their ever being converted into the attractive, inviting, and healthful structures which our students deserve to have provided for them. How much more healthful and inviting are the environments in which our sleek, proud thoroughbreds reside.

Evaluations

The results of this survey indicate that only 41.6 per cent of the secondary schools include a health course in their curricula. This means that some 70,000 of Kentucky's 124,745 high school students attend schools that offer them no specific health instruction.³ Only some 18,000 are enrolled in schools that require students to complete courses in health. It is evident from the information received regarding professional training of health teachers that the larger portion of the comparatively small number of high school students are receiving health instructions from teachers who have little or no

¹"Health and Physical Fitness for all American Children and Youth." *Journal of Health and Physical Education*. Jan., 1946, vol. 17, no. 1, page 5.

²"Suggested School Health Policies," *Journal of Health and Physical Education*. Jan., 1946, vol. 17, no. 1, page 12.

³Kentucky State Department of Education, *Kentucky High Schools, 1945-46, passim*.

special training in the field of health. Indications are that the health course, for the most part, is a fill-in, elective course offered most frequently in the junior and senior years. Since most of the health seems to be taught by teachers who have had little specialized training, it may be reasonably assumed that little scientific planning goes into the setting up of the health curriculum and the adapting of the material to the needs, interests, and capacities of the students.

How do the above observations regarding the present health instruction program in our high schools compare with a thorough program of health instruction? Certainly health is a core subject which deserves specific, well-planned development in schools. On the secondary level it is advisable that instructions in health be given by teachers with special training in the field of health education. Other teachers can, by integrating their subjects, make helpful contributions to health instructions in a school; however, reliance upon this as adequate instruction in the field of health is most emphatically insufficient to meet the needs of Kentucky children, although such has become a glittering subterfuge behind which many school people seek to hide their lack of interest in providing a satisfactory health education program.⁴ *It is recommended that a specific health course be provided in secondary schools with a minimum time allotment of one period a day for a semester of the ninth or tenth grade, followed by a course in the eleventh or twelfth grade with a similar time allotment. The ninth or tenth grade course should emphasize the student's personal health problems and the one offered in the eleventh or twelfth grade should furnish a basis for healthful living in situations of adult life.*⁵

Other recognized features of an adequate health program such as a thorough health examination with effective follow-ups; a complete, up-to-date health record of all students; well-equipped first-aid rooms where students who are injured or become suddenly ill may be given temporary treatment or needed rest; health counseling service and health guidance programs, both of which are for the most part completely absent from the school health program in the high schools of Kentucky. The hurried, superficial examinations irregularly conducted by members of under-staffed, over-worked county and city health departments reveal little of the essential information which is expected from a thorough health examination.

From the foregoing discussion it is evident that the present school health program in our high schools does not begin to approach adequacy. To bring our school health program up to a desirable

⁴ "Health and Physical Fitness for all American Children and Youth," *loc. cit.*
⁵ "Suggested Health Policies," *op. cit.*, pages 42, 44.

standard would necessitate the expenditure of considerable sums of money, involving such vital items as improvement and addition of facilities and equipment, training and employment of personnel, organization and planning. No better investment could be made, however, than one for helping to develop a more healthy, vigorous, and capable citizenry in Kentucky. Any undertaking in this direction is limited by lack of funds, experienced personnel and other considerations; and it may well be that the setting up of an ideal health program in all our schools is beyond our immediate resources, but great improvement can be brought about by better utilization of the resources which are available. *A crusading spirit on the part of school administrators and teachers could do much to improve existing conditions.*

Recommendations based upon the findings

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 uniforms, lack of opportunity for showers following activity periods, lack of sufficient time for receiving instruction, lack of variety in 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.

“How accurate a picture of the physical education program in our high schools does the information from the questionnaire give?” is a question the author has tried to answer in his evaluation of returns. It is felt that there is actually less physical education being taught than returns from questionnaires show. It was noted that a higher per cent of the schools which were prompt in returning questionnaires had physical education programs than did the schools which were slow in returning them. It would logically follow that the reports from schools which did not respond at all would, if they were received, further lower the standards previously indicated. There is evidence, too, that what some schools reported as physical education amounted to little more than supervised play in such games as basketball, softball, and volleyball.

From the facts disclosed in this survey, there seems to be little excuse for the grossly inefficient program we now have in physical education. The facilities, equipment, and personnel of our high

schools are not being utilized to raise the standards of our physical education program. By proper emphasis and recognition of the importance of physical education as a part of the high school curriculum by state, city, and county boards of education great improvement could be made with comparatively little increase in expense. By more careful placement of teachers and arranging of schedules, school administrators alone could do much to advance the program of physical education in our secondary schools.

The gross inadequacy of the present program of health and physical education in the secondary schools of Kentucky is witness to the effectiveness of mild recommendations for bringing about desired results. *It clearly indicates that if Kentucky is to have an effective program in health and physical education requirements must replace recommendations. Only when minimum standards for facilities, equipment, personnel qualifications, and program contents are established for the high schools and required for accreditation by the State Department of Education can we hope for a uniform, statewide program. And if the program is to approach adequacy the minimum standards must be set with consideration for minimum student needs rather than from an estimate of what the poorest school districts could meet.*

The establishment of minimum standards presupposes the setting up of a state organization for the inauguration and execution of a program which meets with the requirements. Such an organization would logically begin with a state director assisted by county directors or supervisors and end with trained personnel in the schools for properly conducting the outlined programs.

This seems to be an opportune time for the setting up of a statewide required program in health and physical education. Judging from the attitudes expressed by high school principals on the questionnaires returned in this survey, they are overwhelmingly in favor of a required program in physical education. The need for a required program is recognized, and the ineffectiveness of our present program is clearly shown.

Although the over-all picture of health and physical education in our high schools is painfully discouraging, some very excellent programs were reported. Much credit is due to the school administrators and teachers who are striving earnestly, often with little financial aid, encouragement, or recognition from boards of education, to meet the needs of their students for adequate training in health and physical education. Their accomplishments suggest what could be done in many other schools to raise our present standards.

SUMMARY

This study has revealed many significant facts regarding the health and physical education program in the secondary schools of Kentucky. Those facts will be reviewed briefly here.

Facts regarding the health program

This survey disclosed that 55.3 per cent of the high schools returning questionnaires offer some form of health instruction; 190, or 41.6 per cent, teach health as a specific subject, while only 67, or 13.8 per cent, make it a requirement. It was noted that a higher percentage of city schools require students to take health courses than do county and private schools, the percentages being 20 per cent for city, 13 per cent for county, and 8 per cent for private schools.

The health course is most frequently offered in the junior year of high school with the senior year the next most popular time for teaching it. One-half unit is the amount of credit most commonly given for health courses.

Over 50 per cent of the high school health teachers supplement the material in the textbook used in their classes with material pertaining to local environmental problems of health. The most common device used for facilitating instructions is the poster. Other devices frequently listed as instructional aids are: projects, field trips, plays, visits to institutions concerned with health, and movies.

While an unsatisfactory number of respondents supplied information as to the number of college hours of health education the teachers of health had completed, it is evident that this subject is being taught for the most part by any instructor who can be conveniently used rather than by teachers who have specialized in the field.

It is unmistakably clear that the high school principals recognize the importance of health training by the large number of affirmative answers given to the question, "Do you believe that health education is as important as other subjects, such as English?" Of the 387 answer, 376, or 97.1 per cent, were "yes."

Responses to the question, "What is the biggest health problem in your school as you see it?" revealed that there are numerous problems to be overcome before an effective health program can be inaugurated in the high schools. The problems reported in the order of their frequency are: lack of proper facilities and equipment, mal-

nutrition and improper diet, unsanitary conditions, lack of effective health instruction, insufficient number of trained personnel, contagious diseases other than colds, lack of proper exercise and recreation, common colds, poor teeth, personal cleanliness, defective vision, undesirable home environment, and indifference of parents. Only eight schools out of the one hundred and seventy-two, or 4.6 per cent of the number responding to the question, report conditions as satisfactory.

Physical education facilities and equipment

It was revealed from the questionnaire returns of this survey that 81.6 per cent of the high schools have gymnasiums. The per cent for private schools is 57, whereas, for city and county schools it is 84.4 and 85.3 per cent respectively. Undoubtedly this comparatively low per cent of private high schools with gymnasiums can be attributed largely to the fact that the private schools did not have access to federal aid for a building program as the city and county schools did. If the 151 gymnasiums which were constructed with federal aid were subtracted from the total number reported, the per cent of schools with gymnasiums would drop from the present 81.6 per cent to 52.5 per cent.

The fact that many of our recently constructed gymnasiums were built with small playing floors and without lockers and shower rooms would indicate that they were not meant for the accommodation of physical education classes.

On the average the high school gymnasiums are used only four hours a day during the school week. In county schools the average is only three hours.

Eighty-three and six tenths per cent of the high schools reporting in this survey have access to playfields, of which 21.9 per cent were estimated to contain less than an acre.

Five items of equipment reported by far more schools than any others were: basketballs, pianos, first-aid kits, softballs, and volleyballs. Items more frequently associated with physical education classes such as mats, parallel bars, horizontal bars, boxing gloves, punching bags, medicine balls, soccer balls, and speedballs were comparatively low in the number of times mentioned. The equipment list of the high schools clearly indicates that the emphasis is on the athletic program rather than on physical education class work.

The physical education program

Just over one-third, 33.6 per cent, of the schools reporting in this survey offer physical education, while only 15.9 per cent make

it a required subject. The percentage of county high schools requiring physical education is only 7.8 per cent; whereas, in the city and private schools it is 24.5 and 28.5 per cent respectively.

Eighty of the four hundred and eighty-four schools reporting give credit for physical education. The amount of credit most frequently given is one-fourth unit per semester, permitting students to earn a maximum of two units during the high school course.

The high school physical education class is most frequently required to meet two periods per week, with forty-five minutes the time most often given to the class period.

The physical education program consists chiefly of three activities: team games, seasonal sports, and calisthenics. There is a much greater variety of activities included in the programs of the city and private schools than in those of the county schools.

Attendance was the factor most frequently checked as a basis for determining grades in physical education, followed in order by effort, cooperation, conduct, improvement, skill tests, and posture. It is clear that for the most part physical education grades are arrived at subjectively rather than by objective tests of skills.

Out of the 163 schools reporting physical education programs, 55.2 per cent require uniforms for classes; 57.2 per cent require showers after classes; 33.1 per cent furnish towels and soap; and 2.0 per cent conduct special classes for handicapped students. Only 12.7 per cent of the total number of schools reporting indicated that students are required to have physical examinations prior to assignment to activity classes.

In co-educational high schools the physical education program for girls is frequently limited to what can be set up for them after the boys' needs have been met.

Of the 308 physical education teachers in the 163 schools with programs, 252 are part time and 56 are full time. Slightly over one-half (50.6 per cent) have majors or minors in physical education.

The program of physical education recommended by the greatest number of high school principals is one that would be required for all students three days a week throughout the high school course. Only 10.9 per cent feel that their present program is adequate.

One hundred and ninety-eight of the four hundred and eighty-four schools included in this survey, or 40.9 per cent, sponsor intramural programs which accommodate 27.5 per cent of the total enrollment of the schools reporting. The three chief activities of the intramural program are basketball, softball, and volleyball.

Basketball is played interscholastically by more than three times as many high schools as any other game. In county and private schools the next most popular game for interschool competition is baseball; in the city schools it is football. Only 14.1 per cent of the high school enrollment in the schools included in this survey participate in interschool contests.

Analysis of the answers given by the high school principals to the question, "What changes would you make in your physical education program if you had authority to bring them about?" revealed that lack of personnel was considered the biggest problem to be overcome in the setting up or expansion of the physical education program. "I would employ a full time physical education director," was the answer most frequently given to the above question.

It was pointed out in Chapter V how unfavorably the program of health and physical education which is now being carried on in the high schools of Kentucky compares to one suggested by outstanding leaders in the field. It was further pointed out that much could be done toward raising the standards of our present program by proper utilization of facilities, equipment, and personnel now available in the schools, but that an effective, uniform program could be expected only after the State Board of Education adopts minimum standards for facilities, equipment, personnel, and program content.

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