A STUDY OF THE SERIOUS PROBLEMS FACING HEALTH
AND PHYSICAL EDUCATION IN OHIO

A Thesis Presented for the
Degree of Master of Arts

By

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1938

Approved by:
[Signature]
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A STUDY OF THE SERIOUS PROBLEMS FACING
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Chapter I

An Analysis of Health and Physical Education
and Its Place in the Curriculum

The term "Serious Problems" as used in this thesis may be considered to mean those urgent situations in the public schools of today (1938) which either directly or indirectly interfere with the desirable development of health and physical education. They are problems because they do not provide the necessary environment, organization, management, personnel and materials for effective teaching or learning. They are serious because they are jeopardizing the values which one expects to receive from health and physical education.

This study will deal with problems or existing situations that are pertinent to health and physical education. First the difficulty must be found and then its source. With this as a background it will be possible to search for the answer. A study of this kind may or may not answer personal problems. Questions must be of the nature of the "serious ones" which face health and physical education as a complete unit of study in order to be included. In other words local problems may have to be answered locally while it will be the duty here to answer those that belong to the profession as a whole. In many instances the local problems and those of the profession in general are identical.

This investigation may serve as a means of detecting
the "pulse" of health and physical education in the public schools of Ohio. At least some of the trends in the field will be observed. It will then become the duty of the reader to determine if they (trends) are directed towards desirable ends. In addition, if they are not, the reader should do his part to make them desirable by doing what he can especially in his own school to bring this about.

Problems which confront health and physical education should be of major concern to all who are interested in the field. These conditions may be thought of as "acid" tests for our profession. There will then be the realization that something must be done which will be effective in neutralizing these "acid" characteristics. Here is a challenge to come to the rescue through investigations and through facing the issues squarely. Experimentation is needed. Leaders who are interested should do original research work.

Society has long felt the need for an adequate program of health and physical education as a part of the school program. The present environment with its automatic machines and high speed tension has brought physical and mental strains in modern living.\(^1\) Physical breakdowns, mental breakdowns, and nervous breakdowns are increasing.\(^2\) Many adults today suffer from physical defects, many of which could have been remedied if a proper and sufficient school health and


physical education program had existed when they were growing boys and girls. At the beginning of the Great War, draft statistics disclosed the fact that nearly one-third of our youths were physically unfit for duty.

Many problems in modern life look towards health and physical education for their solutions. One of its functions then is to alleviate some of the evils of unnatural living, that has been mentioned above. The school is coming more and more to be regarded as a place where people should gain experience in better living. A big approach then to satisfactions, joys, and deep appreciations for life may be found through wholesome activity. Here then, health and physical education proves to be a big help.

Education may be thought of as a continuous lifelong process of change. All modifications or adjustments of the individual results from his own responses to stimuli or situations. Activity produces changes which affect the physical, emotional, moral and mental aspects of life. Dr. Dewey defines education as a "process of the continuous reconstruction of experience with the purpose of widening and deepening its social content, while at the same time the 

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4* Ibid.


individual gains control of the methods involved.\textsuperscript{7}

The true purpose of education might be considered to be the citizenship in a democracy. Educating for national health is an integral part of the whole program of public instruction.

Health and physical education is not a separate phase of education, but rather a definite part of education. All learning takes place through the physical senses and the latter compose the very foundation of health and physical education. Health education may then be considered as "the sum of experiences in school and elsewhere, which favorably influence habits, attitudes and knowledge related to individual, racial and community health."\textsuperscript{8}

"Physical education is concerned with:

1. The organization and leadership of individuals in big-muscle activities, to gain the development and the adjustment inherent in the activities according to social standards.

2. The control of growth conditions naturally associated with the leadership of the activities so that the educational process may go on without growth handicaps."\textsuperscript{9}

Health and physical education must provide situations wherein frequent and desirable reactions occur. These should be of an intellectual, social, and moral type as well as the so-called big-muscle type. When and not until these

\textsuperscript{7}John Dewey, \textit{Democracy and Education}, pp.89-90.


\textsuperscript{9}Hetherington, \textit{School Program in Physical Education}, p.45.
qualifications are provided for, can it be said that health and physical education can be justified within a curriculum.

An assumption can now be made that health and physical education means better citizenship. It is the training for bodily and mental health. Periodic physical examination, personal hygiene, and a rational program of active play and exercise can make this possible. Health, cleanliness, poise, rhythm, vitality and mental alertness are all objectives of a true program of health and physical education. It means poise as well as strength. It encourages mass participation so that all may enjoy active sport. It means periodic physical inspection and examinations to discover and correct remediable defects. It aids in posture and health service. It promotes recreation for adults and play for children.

Health and physical education programs promote the real lessons of education.¹⁰ Through sports and games children develop good sportsmanship and this means character building in real life situations.¹¹ On the playing field and with teams, the boys and girls are stimulated to practice the lessons of control, poise and good behavior.

There is a vital need for health and physical education today when it is intelligently planned and directed. There are two outstanding reasons for the urgent necessity of this field of education: first, the nature of man or his


¹¹Ibid., p. 15.
general make up, and second, the great change in our environment or the conditions of the machine age. People are influenced by the rapid changes of life and therefore tend to live the unnatural type of life. This affords tremendous possibilities for the school program. The child, then, must be the center of our interests and he must be helped to link together the various elements of the human mechanism.

It is essential that all programs of health and physical education be intelligently planned and directed. If the activities were not controlled the objectives might not be realized. Body and mental health might even be destroyed. Take for example some of the former star athletes in various fields. It has come to the attention of the author through newspaper articles, magazines, and discussions that some of these boys have "athletic hearts" as a result of too much strain; some have "trick" knees, sprained backs, fractured skulls, and even mental disorders; and a few boys have been killed during games because some one failed to intelligently plan and direct the program. Games were played without proper equipment. Schedules were increased beyond reason because of financial gains. The proper balance of activities was not maintained neither was it graded. The "felt needs" of the individual in question were not considered. The element of building for later life was overlooked. No one ever thought of the athlete's future as a desirable citizen in a democracy. It is the school's duty to correct these evils wherever they may be and

"Athletic hearts" is a misnomer according to some of the best authorities in the medical profession. Normal hearts can not be injured through athletic participation.
and take measures to prevent them from ever appearing again.

It is natural for man to want to take part in some form of activity. He has been doing it ever since his existence. It has been possible to trace his fundamental movements through all generations; namely, throwing, running, climbing, jumping, and walking. The games of today consist of these fundamental movements. Their uses are somewhat different. During the beginning of man they were used to obtain food and for protection. Today they are used in all forms of games and activities.

The enormous change in the environment of today has also placed a great demand on intelligently planned and directed health and physical education. There has been an increase in leisure time. Modern machinery has lessened the demand for physical power and alertness. Foods have changed from the hard variety to the soft variety. "Over indulgence" in many forms has proven to be the downfall of numerous people.

Summary

1. The term "Serious Problems" as used in this thesis may be considered to mean those urgent situations in the public school of today (1938) which either directly or indirectly interfere with the desirable development of

\footnote{Blanche, M. Trilling, "The Significance of Physical Education in Modern Life," Journal of Health and Physical Education, January, 1938, p.5.}

\footnote{Ibid., p.5.}
health and physical education. (p.1)

2. Authorities agree that health and physical education is not a separate phase of education, but rather a definite part of education since all learning takes place through the physical senses. (p.4)

3. There is evidence to support the statement that there is a vital need for health and physical education today when it is intelligently planned and directed. (p.5)

4. The enormous change in the environment of today, namely, the effects of modern machinery, the increase in leisure time and the biological degeneration in adulthood, has placed a great demand on an intelligently planned and directed health and physical education program. (p.7)
Chapter II

The Relative Importance of the Problem to the Schools of Ohio

This study of the serious problems facing health and physical education has been limited to the State of Ohio. No attempt has been made to study similar conditions in other states. At this time, there are no other similar works known which could be used to compare this State with others. The materials that have been used were gathered only from the public schools of Ohio. This excludes all private and religious schools. It might also be noted that the large city systems have been omitted since their type of problems would either be unique for their particular situation or would automatically fall into those which are considered.

This investigation included five hundred and fifty-seven (557) schools ranging from twenty-six (26) students to nine hundred and sixty-nine (969) students in size. Most of the schools falling in this category were rural in nature as would be expected by their indicated size. Fifty-three (53) of the exempted village schools cooperated by answering the informational sheet that was sent directly to them. A fair sampling of both class A and class B schools may be expected to be found in both good and bad localities. (The latter refers to the various financial, industrial and geographic sections of Ohio.)

In view of the poor economic conditions which have existed during the last ten years (1928-1938) the health and physical education programs are suffering vital modifications.
Numerous schools in Ohio are faced with the problem of maintaining a complete program. Many are still striving to use health and physical education as an "educational agent, a builder of organic power, of personality through the exercise of the instincts and emotions and developer of self-directing individuals equipped for happy and efficient living."\(^1\)

Many schools need authoritative suggestions to help solve their problems. These should be made in view of their situations. Many schools are asking for suggested programs. Others want and need assistance in planning the year's work. The suggested material, herein, is based on the opinions of authorities and has been dealt with so that it will contribute to the average school situation.

The financial stability of the schools of Ohio at the present time is very unsatisfactory. As a result of the questionnaire which was sent out on January 3, 1938, it was found that many schools do not have a teacher of health and physical education and the responsibility of teaching this work has been placed in the hands of some other member of the teaching staff. Other schools are forced to pay low wages and receive a low standard of health and physical education. Still other schools may have well trained teachers, but no teaching materials, equipment, or facilities are provided.

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\(^1\)Ruth Elliott, *The Organization of Professional Training in Physical Education in State Universities*, p. 81.
Several schools are cutting the members of their teaching staff which immediately suggests that the remaining teachers are given extra classes. The jamming together of students and classes has necessitated sacrifices from health and physical education. So-called academic subjects are maintained at the expense of a limited program of physical education. More time must be given to the program of health and physical education if the students are to be well rounded in view of the objectives.

It is desirable to maintain at least the present curriculum in face of this economic crisis. A person must be considered by both his intellectual abilities and his physical abilities. One of these cannot be found without the other in a desirable person. He must have both. How then can training be established for intellectual abilities as a separate unit?

Modern trends in health and physical education are pointing towards their profession as an educational agent. Students learn by doing. Such things as thinking, social stability, emotional stability, purpose of mind, and control of egotism are more than theory — they must be carried out in the laboratory of life. Health and physical education has been a leader in the movement for the development of the individual according to his own needs and capacities. Its programs of testing and measuring, of examining and classifying, of offering individual instruction and opportunities for student leadership are but a part of its contribution
in this direction.

It is hoped that the result of this study will, in some way, serve as a guide for various local schools. It will not only help the reader to maintain the present status of his school's program, but will also be a means by which the program may be improved. The curriculum should experience further development in spite of existing conditions. Careful observation will indicate what others are doing in this field to provide for the "felt needs" of their children.

Many schools are operating with limited equipment. Programs are being cut to the bottom because of the lack of time and teacher personnel. Methods or techniques must be of the most efficient and practical type in order to provide for the above shortages. Since every individual in this democracy has the right to all educational opportunities, it shall be the purpose of this problem to offer suggestions, as supplied by the State Department of Education, and leaders in the field of health and physical education, for the solutions of the major problems facing health and physical education today.

This thesis will attempt to give to the public a comprehensive survey of the existing conditions of health and physical education as they are today in the public schools of Ohio. Many schools may be solving identical problems. Their solutions may be helpful solutions. This paper should not be used as an answer book, however.
Summary

1. Numerous schools in Ohio are faced with the problem of maintaining a complete program due to the State's unstable financial condition. Many schools need authoritative suggestions to help solve their problems. (p.10)

2. It is hoped that the result of this study will, in some way, serve as a guide for various local schools. (p.12)

3. This thesis will attempt to give to the public a comprehensive survey of the existing conditions of health and physical education as they are today in the public schools of Ohio. (p.12)
Chapter III
Techniques Used to Attack the Problem

This study has been based on the Annual Principal’s Reports, interviews with numerous school executives, plus an additional informational sheet which was sent directly to one thousand (1000) schools in Ohio. The Principal’s Reports were those for the school year 1936-1937 and are on file in the Department of Education, State Office Building, Columbus, Ohio. Such items as the extent of equipment, teaching staff and type of program were considered. The personal interviews were carried on during the Summer School Session, 1938, at the Ohio State University. Questions were asked concerning the titles of the chapters of this thesis. The informational sheet was sent out on January 3, 1938 and collected February 11, 1938. Form I was used.

The work in this thesis has been centered around the serious problems which face health and physical education. A great deal of this material was taken from the last five items that have been listed in the informational sheet. The questions were classified into similar groups and automatically fell into the chapter headings because of their nature. Numerous other questions were asked, but they were either personal or local questions which were serious only to the person or locality and not serious in regard to health and physical education as a profession.

Each school is an unique institution and its problems are different from one another in at least one respect. This
FORM I

Analysis of Physical and Health Education Program

Name of School

Date

Type of School

Location

Teaching Staff and Their Training

1.

2.

3.

4.

5.

Equipment - Brief Description

1. Gymnasium

2. Lockers

3. Showers

4. Toilets

5. Swimming Pool

6. Storage Rooms

7. Teacher Office

8. Outdoor Play Space

Supplies - List all available supplies for physical and health education program

Health Supervision

1. Who is responsible for the sanitary and health conditions of your school plant?

2. What is your opinion of the sanitary and health conditions of your school plant?
Health Service

1. Who conducts the physical examinations of your pupils?
2. How often are your pupils examined?
3. Is a report sent to the parents of the findings of the physical examinations of each pupil?
4. Is there a definite follow-up program for the correction of remedial defects?
5. Do you keep a health record of each pupil?

Health Instruction

1. Who is responsible for this program?
2. How often is it offered?
3. Do you have a course of study for health instruction?
4. Is the material prepared in units of study?
5. List reference books used in health instruction?

Physical Education

1. How many periods a week is physical education offered?
2. Give days and hours that it is scheduled.
3. Are the boys and girls classes taught by the same teacher or do they have a woman teacher for girls and a man teacher for boys?
4. Do you give credit for physical education?
5. Do you have the following programs? Who is responsible for each?
   A. Recess program
   B. Noon hour program
   C. Intramural program
   D. Extramural program
   E. Interscholastic Athletics
      Boys
      Girls
6. Do you have on file in your office a year's program in physical and health education?

It is very essential that all facts pertinent to your program be available. Therefore, in view of this phase, fill in the following statements.

1. Attitude of your community towards this program.

2. Attitude of board of education.

3. What are your most serious problems?

4. How can the Department of Education help your school in this program?

5. Any other information.
great difference can be found within the individuals who make up a school. An attempt has been made to present underlying philosophies for the solution of each problem. Aims and objectives have been suggested in regard to these philosophies. It must be understood that these philosophies, aims and objectives exist and function adequately in a democratic form of government.

The principles of outstanding people in the profession have been adopted throughout the study. Their thoughts and suggestions have been included as possible solutions for the problems. This has been done largely through readings of universally accepted books and articles connected with the profession. Opinions of administrators and teachers were asked for during the interviews.

It should be pointed out that the solution for a particular problem in one school may differ from the solution of the same problem in another school. This study will indicate what other people are doing about these problems.

In 1926 Mr. R. M. Grueninger wrote a thesis on the topic, "The Status of Physical Education in the High Schools of Ohio." His purpose was to make a study of the place of health and physical education in the curriculum. He states that the scope of his study included one thousand (1000) public high schools. It has been interesting to note that many conditions that existed twelve years ago have not been improved and many of them still exist today. For example

\footnote{Unpublished Master's thesis of Ohio State University, 1926.}
the following quotation has been taken from his thesis: 2

"Financial difficulties are preventing better courses in physical education in 50% of the high school studies. The executive heads of the schools were asked to state whether or not this condition is due to the inavailability of the money or the attitude of the school board toward physical education.

Following are some of the statements.

1. 'The lack of finances is possibly due to the actual shortage of money, while it is possible also that the board fails to see the advantages of physical education.'

2. 'They say the money is not available.'

3. 'Because we equip and support so many athletic teams.'

4. 'The board of education's attitude.'

5. 'The money could be raised but the people of the district think that physical education is unnecessary and even foolish. There is plenty of support given the athletic teams, largely due to the splendid record of the basketball team. One of the members of the school board expressed the idea that it is foolish to spend money for the transportation of pupils and then appropriate additional money to provide exercise for them when they get to school. Why not let them walk to school to get the exercise?, was his contention.'

6. 'The board of education looks upon physical education as an extra-curricular activity to be classed with dramatics, etc. The contention is that it should support itself as these other activities do.'

7. 'Most Ohio school boards have been handicapped by school finance laws. They are willing, but are blocked at all turns.'

2 Unpublished Master's thesis of Ohio State University, 1926, pp. 75-80.
The growing demand for a more adequate program of health and physical education places much emphasis upon these conditions. The increase in population plus the increase in leisure time demand improvement in programs and equipment. These improvements must take place now so that activities during the next ten years will not be as far behind as those of the last ten years.

Summary

1. This study has been based on the Annual Principal's Reports, interviews with numerous school executives, plus an additional informational sheet which was sent directly to one thousand (1000) schools in Ohio. (p.14)

2. The principles of outstanding people in the profession have been adopted throughout the study. (p.15)

3. It has been interesting to note that many conditions that existed twelve years ago have not been improved and many of them still exist today. (p.15)
Chapter IV

Financial Problems *

The School Board

To answer the question of what should be the school board's attitude towards the purchase of equipment, the following quotation is taken from the Ohio School Laws, 1934.

"Boards of education are without power to expend public school funds under their control to support or promote the competitive playing of games by picked teams from the pupils of the public schools.

Interscholastic athletics as the term is commonly used, is not a proper public school activity under the law.

A board of education in Ohio is not authorized to pay from public funds under their control the expense of furnishing basketball, football, or baseball uniforms for the high school basketball, football, or baseball teams as the case may be.

A board of education in Ohio is not authorized to pay from public funds for the expense of transporting their basketball, football, or baseball team to a distant point for the purpose of holding an athletic contest between that school team and a team representing another school."

Duties of Boards of Education: 2

"It shall be the duty of the boards of education or other officials in charge of all schools in the state to make provision for the establishment and maintenance in their schools of the courses in physical education prescribed by section 7721 of the General Code."

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1 General Code, Section 7721, History, pp.475-476.

2 Ibid., pp.477-478.

*For more extensive grouping of financial problems see Appendix.
It can be noted from the above School Laws that the board of education is held responsible for a balanced program of health and physical education. Other clauses have been inserted in the Code in order to protect the State Department of Education, the school and students from becoming the victims of an over developed and over specialized athletic machine. The laws encourage a program that is educational, but definitely discourages "professional" athletics which detract from an individual's desirable development in regard to the objectives of education.

Another purpose of the School Laws is to insure a balanced program in health and physical education for every boy and girl instead of only a select few. The resources of the state and school should be available to all since they exist in a democratic nation.

Financing Facilities and Equipment

Before facilities and equipment are provided for any school, a careful and complete investigation should be made which includes: the needs of the school, the aims and objectives of the proposed program, and the possibilities of offering every educational advantage possible. This investigation should be made by competent people who are in a position to know what should be done. This planning must be thorough and accurate in every detail.

Considering first the amount of play space necessary for an efficient program, The Ohio Health and Physical
Series, Volume III, points out that many schools are using one hundred (100) square feet of outdoor play space per student as their standard. The National Education Association recommends one hundred and fifty (150) square feet per student. Strayer of Columbia, cites standards as follows: ³

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<td>One room rural school.. 2 acres</td>
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<tr>
<td>Two room rural school. 3 acres</td>
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<tr>
<td>Three room rural school........ 4 acres</td>
</tr>
<tr>
<td>Consolidated school........ 10 acres</td>
</tr>
<tr>
<td>Junior High School........ 8 to 12 acres</td>
</tr>
<tr>
<td>Senior High School....... 12 acres</td>
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In order to finance any project or program of health and physical education today, a great deal of cooperation is required by everyone involved. Both the State Department of Education and the people of the local community may request the local board of education to finance the program. Many local citizens may aid in providing the necessary equipment. Yes, they may even bring pressure on the community in order to pass a bond issue.

Obviously this is not the logical attack for such a problem. In the first place, it is against the law of the State for the local board to support or promote the competitive playing of games. It has been suggested in the informational sheets sent out by the author that this phase of the law be modified with definite limitations of funds depending on the enrollment of the particular school. This modification then would provide for necessary supplies such

³Ohio Health and Physical Series, Volume III, pp. 110-111. (For a complete list of proper equipment for a playground see Chapter V).
as showers, dressing rooms, clothes, playgrounds and their equipment. This would be placing the subject of health and physical education on the same level as general science, chemistry, or home economics. It is generally assumed that health and physical education is a phase of education. Therefore, this plan should be justifiable.

In the fall of 1918 a National Committee called upon the Playground and Recreation Association of America to establish a National Physical Education Service to act as the organizing machinery through which the influence of all interested agencies might be unitedly directed towards the securing of state and national legislation for physical education. This service has been busy placing magazine articles, making the appeal for support of physical education before numerous conventions and conferences, and actively assisting in various state campaigns. The active cooperation of many child-welfare, educational, and civic organizations has made possible much effective work.

Teachers must give effective, hearty promotive work. The program of health and physical education in each school in Ohio should be strengthened. Steps should be taken to bring every influential citizen and especially every governmental official into contact with the programs. If

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possible use community leaders as officials in athletic contests, or at least make sure that they are onlookers. Bring the subject of physical education before every social or civic organization with which the school is connected. Affiliate actively with the movement for physical education in this State. If no such movement is known, communicate with the National Physical Education Service in Washington, D.C. Interview the newspaper reporters. Talk physical education. Think of what it would mean to health and physical education if every educator in the State would, during the next year, say to one hundred (100) people with evidence of feeling and conviction that health and physical education is a fundamental element in the school curriculum, and that legislation should be enacted to help finance it.

The State Department of Education, the local superintendent and the teacher of health and physical education should cooperate in such a way so as to instruct the local board of education of the requirement of the program. As a result of such a conference, the superintendent could advise the board as to the needs of the local school as outlined in a definite report.

A school board that has the financial support of the state plus an analysis and the recommendations for its school, could support a satisfactory program. Until this is feasible though, other steps must be taken to solve the immediate problems.

The solutions for the financial problems will
vary depending on the kind of a community in which the schools are located. Most schools including county, exempted village, and city use the athletic association as the source of financing their programs, but the majority of city schools make necessary provisions in the budget of the school board. Some of the other methods now in use are as follows:

1. Activities card must be had by each student -- required fees.

2. Proceeds from all athletic contests participated in by the school. Varsity sports usually pay for all sports.

3. Athletic funds or associations.

4. Receipts from entertainments and plays.

5. Financial needs may be supplied from the school funds.

6. Students may furnish their own equipment."

Mr. L. M. Moorehead, State Supervisor of Health and Physical Education for Ohio, 1938, has made a study of schools which are operating a program with "home made" equipment. For further information on this topic the reader may refer to his study.

The purpose of a budget is to control expenditures so as to procure from them desirable results. This is accomplished through a study of the needs of the group for whom the money is to be spent and then determine if the proposed expenditures can be covered by the estimated income.

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Ohio Health and Physical Education Series, Volume III, p. 84.
The making of the budget, therefore, consists of presenting the needs, estimating their costs, checking the total against the probable income, and adjusting the needs to balance the income.

A teacher employed in a system that does not use a budget should make every effort to convince the administrator that one should be used. This should be done before the year has progressed too far. One should make out a budget in the spring, before school is out, which can be used for the next school year. The presentation of a business like statement, even though not requested, is certain to attract the attention of an administrator, assuring him of the department's desire to plan wisely for the future.

In order to determine the needs of the coming year, it is necessary to go through the complete inventory lists of all equipment and supplies used by the department. Obviously it will be necessary to consult with all workers in the department in procuring complete information.

Administrators and teachers should "shop" before purchasing equipment and supplies. Many companies offer reductions from retail costs.

Quite often it is necessary for the departments of health and physical education to conduct money raising campaigns. A few methods are discussed below.

The Washington Stamp Plan 7 is one by which high school students may finance their activities easily, all

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students getting the benefit of participating in school affairs. A student pays ten cents a week for thirty-six (36) weeks or three dollars and sixty cents ($3.60) a year for which he is admitted to athletic contests, evening entertainments, to all clubs, to all class parties, and all other functions. Upon payment of ten cents each week an activities stamp is issued to the student, the stamp being attached to a folder which is presented for admission to activities as stated above.

The teachers of all activities can submit to the principal a statement of the amount of money thought necessary to carry on the activity for the ensuing year. The principal can then estimate the amount of money to be received and the number of students who will agree to pay ten cents a week for thirty-six weeks. In the homerooms a student leader aided by the teacher should present the matter to the students and ask them to sign pledge cards saying they will pay the three dollars and sixty cents. If enough sign, the plan is adapted. A student finance committee should handle the distribution of stamps to rooms and a room representative can sell the stamps to students, collect the money, and turn it in to the school office or to a treasurer issuing proper receipts in duplicate for all money received. A note may be added here for the administrator, teachers, and finance committee to be on the alert to prevent students from becoming delinquent.

Some schools make a little money on rental of the
gymnasium which, although it probably goes into a general fund, does help the general school budget from which the physical education budget is derived. "In Ohio, thirty-four schools charge from $4.00 to $6.00 for this purpose and thirty charge from $10.00 to $20.00."

Some schools own the departmental regulation padlocks which are required, renting them for seventy-five cents ($0.75) a term and paying a fifty cent refund ($0.50) when they are returned. At the same time all locks are uniform so the department is content and the fee is less than the cost of a lock so the student is satisfied.

Some schools continue candy, ice-cream, and apple sales in an effort to raise money to help finance their programs. In others, the students put on shows, rummage sales, bake sales, and benefits of all kinds. The sale of candy may be questionable since it contributes nothing to the health of the student. The sale of milk would make an appropriate substitution.

It is an unwise procedure to force students and teachers to put on shows to finance a part of their health and physical education program. When this is carried out, educational work is at a standstill and the regular routine is broken.

The equipment and supplies for the school playground are identical with the equipment and supplies for a

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municipal playground. Many schools are answering their problems and balancing their budgets by cooperating with the municipal park and playground board. If the school has not sufficient space the community playground board should assist in providing additional space near the school. The activities should remain in the control of the school.

All playgrounds should be made to be "good neighbors". They should be made attractive by proper landscaping. The conduct of the playground should be such that no one would be disturbed by having a playground near.

This immediately suggests that the school place some one, who is competent, in charge. This person has at his disposal many channels by which he may collect and construct facilities and equip the playground.

In some communities all children who use the playground are asked for small fees in order to enjoy the privileges. Still others are supported by the business men and public spirited people of the community. Local clubs often help. At the present time the federal government will supply sufficient labor if the necessary building materials are furnished. This reduces the cost considerably and many schools are taking advantage of the situation.

Supplying Adequate Textbooks

There is also a need for adequate textbooks for health and physical education in many schools. For complete lists, the reader may examine the Ohio Health and Physical
Education Series, Volume III. Another good bibliography may be found in the Research Quarterly. These books may be available in school libraries, community libraries, or state libraries. A great deal of material is furnished by the federal government, Washington, D.C., Department of the Interior. The following is a list of organizations publishing health and physical educational material that may be obtained by writing directly to them:

American Heart Association,
50 West 50th Street, New York, New York.
American Home Economics Association,
617 Mills Building, Washington, D.C.
American Medical Association,
535 N. Dearborn Street, Chicago, Illinois.
American Nurses Association,
50 West 50th Street, New York, New York.
American Association for Health and Physical Education,
Ann Arbor, Michigan.
American Public Health Association,
50 West 50th Street, New York, New York.
American Red Cross, National Headquarters,
Washington, D.C.
Boy Scouts of America,
200 Fifth Avenue, New York, New York.
Campfire Girls,
527 Fifth Avenue, New York, New York.
Carnegie Foundation for Advancement of Learning,
522 Fifth Avenue, New York, New York.
Girl Reserves, Y.W.C.A.,
600 Lexington Avenue, New York, New York.
Girl Scouts of America,
527 Fifth Avenue, New York, New York.
Joint Committee on Health Problems in Education of the National Education Assoc. and the American Medical Assoc. care Dr. T. D. Wood,
525 W. 120th Street, New York, New York.
National Child Labor Committee, 215 Fourth Ave.,
New York, New York.
National Congress of Parents and Teachers,
1201-16th Street, N.E., Washington, D.C.

9 pp. 144-145.

10 October, 1932.
National Education Association,
1201-16th Street, N.W., Washington, D.C.
National Health Council,
50 West 50th Street, New York, New York.
National Physical Education Service,
315 Fourth Ave., New York, New York.
National Recreation Association,
315 Fourth Ave., New York, New York.
National Safety Council,
120 W. 42nd Street, New York.
National Tuberculosis Association
50 West 50th Street, New York, New York.
National Women's Christian Temperance Union,
50 West 50th Street, New York, New York.
Ohio High School Athletic Association,
Fort Hayes Hotel, Columbus, Ohio.
Ohio Public Health Association,
72 S. Fourth Street, Columbus, Ohio
United States Department of Agriculture,
Washington, D.C.
United States Public Health Service,
Treasury Department, Washington, D.C.11

Great harm can be done to students if textbooks
are used as an end in themselves. Few, if any, textbooks
provide for individual needs and differences nor do they
take into consideration the place of an individual in a
democracy. A teacher should ask himself such questions as:
"What am I trying to accomplish through my teaching, other
than to see to it that my students can pass a content
examination when they have finished with my course?" "How
does my teaching actually affect the behavior of my students?"
"Is the material which I teach actually valuable to my
pupils in meeting their needs and furthering their interests?"

The particular needs of the adolescent in any
given community will vary and they can only be discovered by
a careful study of the group of students for which a given

11Ohio Health and Physical Education Series,
Volume III, pp. 432-433. (Quotation revised with permission
of the author.)
program is being developed. To do this, a teacher has only to utilize available resources and agencies. The following possibilities suggest leads:

1. A study of the individual students in order to discover and define their persistent problems, interests, and needs. The assistance of students, parents, and teachers should be utilized, though the data gathered must be carefully interpreted.

2. A study of the community through a survey of occupational, recreational, civic, religious, and community factors with which the growing adolescent is interacting.

3. A study of the findings of other groups working on similar problems (for example, the Committee on the Function of Science in General Education, Commission on Secondary School Curriculum of the Progressive Education Association, the University of California Studies).\(^\text{12}\)

Out of such studies, any teacher or curriculum-making group can learn much about the needs of students, even though such information must be regarded as tentative and subject to change with experience.

Once the values or objectives to be sought have been established, a teacher may attempt to list all of the specific facts, principles, etc., pertinent to the ends set up, and then classify and organize this material as subject-matter-to-be-learned. A simple illustration of this procedure is afforded by the average textbook, which provides a definite and concrete pattern to be followed. The danger in such a procedure disregards the findings of psychology and is not the best way to secure understandings. The health

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\(^{12}\) "Science in General Education", Progressive Education Association, p. 447.
and physical education teacher must himself play a more significant role in curriculum-making if his pupils are to get the most out of their physical education experiences and if the educator is to grow professionally.

"It should be clearly understood that the way in which learning experiences are organized is of great importance in achieving the characteristics of behavior necessary for the full realization of educational values. The health and physical education teacher must keep in mind not only the potential health and physical education understandings which may grow out of a given learning experience, but also the need for organizing learning so as to achieve the habits, attitudes, special abilities, and skills important in realizing the educational values of a democratic society.

Community Mores

There is a trend today in health and physical education of placing too much emphasis on winning and too little on the other values of the field. Many schools have money to "win", but not to carry out a well rounded program.

In the first place the profession should be represented by only well trained and qualified teachers. In other words, raise the standards for teacher training. This is being done in some institutions of higher learning and within a few years there will be more improvement along these lines.

In the next place, in order to overcome this

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13 "Science in General Education", Progressive Education Association, p. 450.
"winning fever", these highly qualified teachers must help to educate the public. They must show the relation of their high ideals to real life situations. This public education should develop character to the end that individuals and groups will achieve greater happiness.

It was pointed out earlier in this study that a modern program of health and physical education is essentially a force for education. Every phase of this field should answer to the best educational principles and practices.

In order to determine the main objectives that should guide health and physical education in a democracy, it is necessary to analyze the activities and needs of the individual. Each activity of the school should be organized definitely for the purpose of making a maximum contribution to the interests of the individual. Health and physical education should always try to provide and promote change which is directed towards the improvement not only of the individual but society as a whole.

A modern program of health and physical education has three main divisions: first, The School Health Service; second, Health Instruction; and third, Physical Education. The unity of these three is essentially a force for education. Every aspect answers to the best educational principles and practices. The following objectives will all relate in some way to any modern progressive objective based on the school's interpretation of democracy and on its philosophy of education.
The specific objectives of health and physical education are:  

1. Of the School Health Service  
   a. To acquaint the individual with those conditions of personal welfare which may and do act as deterrents to complete mental and physical development.  
   b. To insure a school population physically and mentally fit and able to receive the instruction given.  
   c. To so control the environment of the school as to protect and promote the health of the individuals concerned.  

2. Of Health Instruction  
   a. To educate the individual in ways to improve or conserve his health.  
   b. To influence the conduct of an individual in matters of personal and community health so as to produce the greatest personal happiness and compatibility within the social group.  
   c. To influence future generations through the conduct of the individual so as to insure the conservation of the best in man against those factors detrimental to the race.  

3. Of Physical Education  
   a. To promote organic vigor through motor activities.  
   b. To teach recreative skills so as to contribute to education in the worthy use of leisure.  
   c. To assist the individual in making a harmonious adjustment to the social world, to teach those significant lessons of the play-field conducive to getting along better with his fellowmen; in a word, to educate in socialization.  

Many schools are taking the prize off winning. They are rapidly cutting their schedules in the number of games to be played in a single season. More time is being spent within the school itself, developing an intramural program.  

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which provides participation for every one and not just a select group.

The progressive teacher of health and physical education will present evidence to his community in order to point out the right side of the picture. This will be an attempt to wake the community up and cause them to think of all of the objectives instead of only winning. A teacher may even campaign against this evil by using the school, press, or projects to enlighten the people of the community.

When these new trends are realized it will cease to become a financial problem of "money to win, but not to carry out a balanced program". Here is a challenge to every teacher to educate the public in terms of sound objectives.

Summary

1. The local board of education is held responsible for a balanced program of health and physical education by the School Laws of Ohio. They are to insure a balanced program in health and physical education for every boy and girl instead of only a select few. (p.22)

2. Before facilities and equipment can be provided for any school, a careful and complete investigation should be made which includes: the needs of the school, the aims and objectives of the proposed program, and the possibilities of offering every educational advantage possible. (p.22)

3. In order to finance any project or program of
health and physical education, a great deal of cooperation is required between the State Department of Education and the local board of education. (p.23)

4. It has been suggested through the author's informational sheet that the State should authorize the local board of education to support, promote and control the competitive playing of games between high schools. (p.23)

5. Textbooks may be useful in education, but great harm can be done to students if they are used as an end in themselves. (p.32)

6. Once the values or objectives to be sought have been established, a teacher may attempt to list all of the specific facts, principles, etc., pertinent to the ends set up, and then classify and organize this material as subject-matter-to-be-learned. (p.33)

7. Some schools in Ohio place too much emphasis on winning games and too little on the other values of health and physical education. (p.34)

8. The problem of "money to win, but not to carry out a balanced program" is partially being answered by having the students spend more time within the school itself, developing an intramural program which provides participation for every one and not just a select group. (p.36)
Chapter V

Health and Physical Education Program

Administration

The administration of a health and physical education program in the public schools of Ohio may be defined as "that part of the school program which is concerned with the organization, management, regulation, and control of personnel and materials so that they will function smoothly, efficiently, and effectively as an integrated whole in achieving the desired goals." The department of health and physical education is most efficient when the elements and the activities are combined in such a way as will best achieve the purposes of the school. Before an administrator can make his maximum contribution he must not only have a clear idea of the purposes of the school he is to administrate, but also a clear conception of his place in the educational picture. He must be clear as to his sense of direction.

One of the big tasks of an administrator in health and physical education is to integrate the objectives of the program, the activities of the teacher and pupils, and the materials that are used. It should be expected of an administrator to provide for a smooth and effective program. Students should have an opportunity to work and achieve their objectives, personnel and materials into an integrated unit.


*For more extensive grouping of the problems of the health and physical education program see Appendix.
The general function of an administrator is to manage matters in such a way that they provide for effective teaching and guiding of pupils. These leaders should aid the teachers so that the latter may teach and be free to the greatest possible degree from outside duties and the responsibilities in connection with the operation of the school. Unfortunately some think that a big part of their job is to check up on teachers, to be an inspector or boss.

An administrator should be concerned primarily with the management of teachers and pupils in their various relationships which occur in connection with participation in the program. This will require a definition and statement of the functions of health and physical education in the school. The aims and objectives of the program must be established. A study should be made of the qualifications and duties of the training staff, the money, supplies, equipment, and facilities available for use in health and physical education. Careful consideration should also be given to the curriculum which is to be taught and all of the cooperative relationships involved.

Some administrators are willing to follow the path of least resistance. They are very clever in evading issues. As a rule they never formulate a definite program nor set up any objectives to be achieved. They are primarily concerned with maintaining the status quo.

Another type of an administrator may be called the
"go-getter" or "efficiency expert" type. This kind may be a person with a great deal of personality who prescribes the program and the objectives and directs the activities of the staff. Quite often prompt results are achieved under this type of administration. It has several weaknesses however. There is great danger that the interests and originality of the other members of the staff are likely to be suppressed. This will usually check the cooperative pooling and discussion of interests and ideals.

Various administrators place much emphasis on cooperative effort. The program, objectives, and procedures are determined in a democratic manner by the persons involved. The conscientious and original efforts of individuals are recognized and encouraged. This type of administration should be the most practical for many school situations. Its procedures should try to accomplish the objectives of health and physical education and not as ends in themselves. It is well to point out here that the organization of the program must be on a functional basis.

If a teacher is to have any sense of direction concerning his work in health and physical education he must be supported by an administrator who is consistent with a sound social philosophy and a philosophy of education. Too often the efforts of the program are destroyed by a leader who is dogmatic and autocratic in manner.

Some people are willing to consider an administrator of health and physical education as a "foreman" employed
by the community to see that it gets its money's worth from staff and pupils. Others may consider him as a "hospital superintendent" whose duty it is to see that working conditions for the teachers are kept favorable. Other trends point to an administrator as a "consulting specialist" to whom teachers may look for technical aid on difficult problems. "The new movement in education considers the administrator in a democratic society. A person, who respects personality, encourages initiative, self-reliance, responsibility and intelligent participation."^{2}

How then does this new movement in education reflect on the administration in health and physical education? The latter involves the integration of activities which are concerned specifically with providing educational experiences for pupils. This includes such problems as those dealing with the curriculum, teaching staff, equipment and facilities. It involves also problems of a business and financial nature.

Most people in America today accept democracy as their form of social and political organization. Since this is true, all school activities should be conducted so as to provide experiences in democratic living and behavior for the teachers and pupils.

This is only the beginning since an administrator must propose and support a definite statement of policies and aims. This is essential if all members of the staff are

expected to work together smoothly and effectively. In nearly all cases where there is a lack of cohesion and cooperation in a department it is caused in part by the failure of administration to secure a common understanding of the aims and policies. It now becomes the duty of the administrator to support and carry out these aims and policies.

As was mentioned above, the administrator must now make it possible for children to have experiences which will help accomplish the objectives of education. All administrative procedures should be directed towards making it easier for teachers to plan and guide the educational experiences of children. It is well to keep in mind here the modern viewpoints that education is a process of growth through experience and that the most valuable educational experiences are gained through the self-directed activities of the learner.

It now becomes the duty of the administrator to provide and maintain adequate facilities and equipment for the health and physical education program. This has been discussed under the heading of "Financial Problems". It is interesting to know that many valuable and interesting health and physical education activities can be carried on with a very minimum of facilities and equipment. No teacher should give up hope and fail to put forth his best efforts because of the lack of an elaborate physical lay-out. Sufficient expendable supplies are also essential for a comprehensive program.

The means, procedures, and routine which are set up by administration should be based largely on tested
knowledge. "Off-hand" rules are not desirable especially when scientifically established data are available as a foundation on which to base procedures. For example, the informational sheet reveals that many schools use no method at all for the classification of pupils. Others use some worn-out or unjustifiable technique. There are today, many available techniques for the classification of pupils but they have failed to be put in use.

It has been found by this study that such things as establishing objectives and levels of achievement, and the evaluation of accomplishments are dealt with in a haphazard and inaccurate manner. It should be the responsibility of administrators as well as teachers to become familiar with the scientifically established procedures in health and physical education and to use these methods in the solution of their important problems.

The administrator should be in charge of setting up some plan of organization which will prove to be clear and direct lines of control and responsibility. This should also be carried out within the departments. It would then be possible for the accepted aims and policies to be carried out efficiently with a minimum of friction and misunderstanding.

A good testing program now becomes evident. "Snap-judgments" of individuals should not be used as means of evaluating the success or failure of physical education.

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programs. It is necessary to measure the results of each program by means of valid and reliable measuring instruments.

Often times certain policies and procedures become established so firmly that it is extremely difficult to change them. This tends to check progress. It is true that many traditions are still helpful but some provision must be made for progress. Progress does not mean change or speed necessarily. It may be very harmful to change for the sake of changing. A capable administrator should prevent health and physical education from becoming stagnant and fixed, and should make certain that the program and form of organization are flexible enough to encourage change and growth.

Community relationships contribute extensively to a sound program of health and physical education. There should be a coordination and integration of the activities of teachers, pupils, and other individuals and organizations in the community. There are many examples of individuals and organizations whose interests and programs touch in some way the school program of health and physical education. For example the Red Cross, community playgrounds, sports writers, and parent and teachers associations cannot be overlooked.

Every one is always interested in the value of new and old experiences. For this reason some one must interpret health and physical education to the general public and to the members of the faculty. Many people think of physical education as football teams. Others picture it as a developer of big muscles. Every one has a background of experience
that is unique and different from that of every other person.

In a democracy the school must provide the kind of health and physical education programs that the majority of citizens in a community want. A teacher's responsibility should be to educate the citizens to be more intelligent about health and physical education and to make them want a better program. This work can be made effective by an organized program of public relations designed to interpret and explain health and physical education.

A study, made by Allen G. Ireland, M. D., on "The Administration of Physical Education", reveals that there are many common mistakes in administration. He states that frequently, the profession is too generous in accepting that which is already functioning, that is, the present program. The children seem to be happy; every one is busy; and there are no serious criticisms. The difficulty is that all of this is on the surface. What about efficiency, economy, actual achievement, children's needs and the like?

Another common error is the wholehearted acceptance of some activity, project or device described in a magazine. It worked elsewhere so it ought to work here. Sometimes that is true, but unless it dovetails into the plan, a realignment of parts is necessary, and if school authorities give in to enthusiasm too often, the program soon resembles grandmother's crazy quilt.

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More time should be given to a study of the respective communities. Such things as the racial characteristics, the temperament of the people, the social and economic conditions, and the needs of children must be known before the school can function effectively.

Administrators and teachers should know what is expected of them as directors, as members of the administrative staff, as teachers and as individuals. It is also essential for a teacher to understand the administrator's concept of physical education and what he thinks should be accomplished. An interpretation of the educational policies of the school organization is important. Any information concerning the present or immediately preceding program should prove valuable to a teacher. The administrator may then indicate the policies which have been established such as:

1. Is interscholastic athletics regarded as a part of the physical education program?

2. Am I, as a teacher responsible to a building principal or only to the head of the school system?

3. Are health and physical education regarded as one field, as separate though related fields, or as overlapping divisions?

4. Are pupils exempt from physical education only upon order of the school physician?

A progressive administrator should consider it important to acquaint himself with certain phases of community relationships. Bankers, business organizations, newspapers,
club members, church members, and various other civic leaders, in all probability, have personal opinions which may have a direct bearing on the school's program of health and physical education. These people may not be educators, but as long as they are influential and in part, control the school, they must have a voice in the school problems.

An administrator must consider procedures for program development. It is necessary to have a foundation program since it gives purpose and meaning to activities and instructions. Coordination with the principles of education and the policies of the school can be effected. A foundation program can be an essential factor in efficiency and in making the best use of the allotted time. Provisions for meeting the needs of individuals and for satisfying the interests of groups are established. The pupil is also protected. The measurement of achievement is made possible. It is well to summarize that progress can be assured in no other way.

There are various other points of clarification which an administrator must establish before effective teaching takes place. Terminology and definitions must be established; certain principles of physical education as basic to the program must be acknowledged; and the early development and acceptance of aims and objectives is important.

"Aims are guides to the direction physical education will take. They express general purposes, larger aspects, and remote attainments. Aims together with principles, constitute the foundation of the program structure. Without them it would be difficult to justify physical education in the curriculum or as a
department. An objective is the anticipated outcome or planned result of first, a purpose; and second, a specific activity growing out of the purpose."

It follows then that provisions must be made for determining the physical and social needs of pupils.

At the outset an administrator and his teachers should know the extent and weight of their authority. In this connection the administration of physical education differs in no respect from other major departments. Certain functions may be assigned to the physical education staff, but final responsibility rests locally with the principal, or in the case of major affairs, with the superintendent of schools.

Where three or more teachers are employed, it is usually advisable to effect some degree of department organization in which one member of the staff is appointed as head. Staff organization is recommended as having these advantages:

1. It facilitates program planning and construction.

2. Coordination and progression are assured to a higher degree than would be true otherwise.

3. Regularly scheduled conferences are possible. These permit exchange of ideas, discussion of common problems, planning of new projects, and reports on visits, conventions and new literature.

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6Ibid., p. 18.
ADMINISTRATIVE RELATIONSHIPS OF HEALTH AND PHYSICAL EDUCATION IN HIGH SCHOOLS

**SPECIAL PERSONNEL OF SCHOOL PHYSICIAN SCHOOL NURSE**

With actual or supervisory charge of:

**BOARD OF EDUCATION**

SUPERINTENDENT

PRINCIPAL

**PROGRAM OF HEALTH AND PHYSICAL EDUCATION**

TRAINED STAFF OF MEN AND WOMEN

Duly certificated in the field

**HEALTH COMMITTEE**

Cooperating with or directing hygiene of instruction, school lunch, sanitation of plant, correlation of health teaching with other subjects, safety, exclusion and disease control.

**HEALTH SERVICE**

Health examinations leading to detection and correction of defects and placement in activities.

Follow up of examinations.

Disease control.

Sanitation of plant.

Seasonal examination of athletes.

**PHYSICAL EDUCATION**

For all boys and girls four (or six) years—none excused—minimum 100 minutes per week

**ACTIVITIES**

Based on age, grade, or physical fitness and assigned after examination direct to:

Restricted or individual group

Classification test for determining participation in:

Modified games

Elective groups

Restricted exercise

Games

Corrective or orthopedic work

Stunts

Classes

Mass activities

Sports

Prepare for

Seasonal activities

Individual sports

and games

Intramural sports

Interscholastic sports

Personal hygiene

General hygiene

Public health

Safety education

First aid

NOTE: ACADEMIC CREDIT TOWARDS GRADUATION SHOULD BE OFFERED FOR SUCCESSFUL PARTICIPATION IN ANY AND ALL PARTS MARKED -C-.

Prepared by

Department of Education

State of Ohio

1931
4. Cooperation is stimulated as well as a feeling of unity and common purpose.

5. It is easier for the superintendent of schools to deal administratively with a unit than with individuals."

The effectiveness of physical education in schools depends largely upon the kind of administration provided, once a definite program is in operation. The essential factor is helpful, sympathetic leadership.

The supervisor must be thoroughly familiar with the objectives and the program. It is a distinct advantage if he understands the school policies and organization and, in general the work of the classroom teacher. Possibly some inservice training to that end can be given.

Based on the information received through the informational sheet it is probably true that the majority of physical education teachers are carrying an excessive load. It should be noted in this connection that no justifiable basis can be advanced for increasing the period-load of physical education teachers beyond the standard established for other teachers. Allen G. Ireland, M. D., Director of Health and Physical Education, New Jersey State Department of Public Instruction has made several investigations concerning this problem. From his work, it appears that a fair standard would be as follows: 7

"1. Thirty teaching periods a week

without after school work, special classes, or administrative duties.

2. Twenty-five school time periods when additional duties are required. The total should not exceed a maximum of thirty-five periods.

3. Twenty school time periods for the teacher having full-time after-school work such as a coach of the school teams."

Before accepting the above or setting other standards, a job analysis should be made in the interest of fairness. In addition to the above, the proposed job analysis will bring out the necessity for assigning one or more periods daily for conferences, planning, routine duties, office work and inspections.

In summarizing it may be well to quote from Dr. Ireland's article. 3

"A. Standards for the selection of activities.

1. Local needs and conditions must be considered; specifically, type of community and pupil, personnel, time, facilities, equipment, supervision, and so forth.

2. Educational policies and the type of school organization must be followed.

3. Objectives must be at the basis of selection.

4. The growth and developmental needs of children must be met.

5. The interests, tendencies, abilities, characteristics, and wants of children, as well as sex differences and physiological maturity, must be taken into account.

6. Activities must have meaning and purpose to the child; they must appeal.

7. Activities must insure a satisfying response on the part of the child; they must be interesting.

8. Activities must provide situations identical with or at least approximately similar to the natural play situations of children outside of school.

9. As a corollary of the above, the school program must provide those activity-situations which all children should have normally but which they do not have because of restricting community factors.

10. Activities must provide the child with opportunities for creative self-expression.

11. Activities must insure the development of the fundamental physical skills that mean effective use of the body in all ordinary life-situations, in accident prevention, and in recreative pursuits.

12. The factors of health and safety must be considered.

13. The specific needs of individual pupils and especially physically handicapped pupils must be provided for in the selection of activities.

14. The objective of creating interest in recreational activities of value outside of school must be upheld.

15. Activities must provide situations in which the use of appropriate methods will bring out the correct social and moral responses.

16. The selection of activities must take into account the seasonal interests of children.

17. Activities appropriate to the testing and measuring procedures must be included.
3. Principles underlying the selection of method.

1. Methods must be appropriate to the activities, and they must insure safety and health, including mental and social health.

2. Consideration must be given to methods that bring out such values as growth, development, and physiological results.

3. Methods must be chosen with a view to making the activity program interesting and satisfying to the pupil. In other words they must enhance the activities that satisfy the play tendencies of children.

4. Age and sex differences must be taken into account.

5. At certain points in the program, we must consider the specific needs of individuals or groups.

6. We must be sure that methods insure these outcomes:
   - Give meaning to activity in the understanding of the pupil.
   - Stress proficiency in and attitudes toward the recreative activities.
   - Give prominence to the responses, attitudes and ideals that typify correct social and ethical conduct.
   - Stimulate the creative tendencies in children.
   - Bring out leadership qualities and acceptance of responsibility.
   - Insure both quantity and quality in regard to concomitant learnings.
   - Insure continuance of desirable activities in out-of-school hours.

7. We must ask ourselves "What methods will best further such desirable achievements as--
   - Effecting correlation with other school subjects and departments.
   - Acquainting parents and others with the meaning and values of physical education.
   - Measuring individual abilities and achievements at various stages of progress?"

8. Methods must bring out the identical elements of physical education situations and life situations in order that the pupil may comprehend the learning in one that may be
applied to the other.

9. Methods must give purpose to the mental activity involved in physical education and provide opportunity for study and reflection.

10. Methods must be devised in behalf of physically and mentally handicapped pupils.

11. Methods must permit a great degree of pupil-initiative in the planning and conducting of the program.

Summary of Standards

It seemed fitting to include at this point a summary of the most important standards recommended. The list is not exhaustive and the order of listing has no significance.

1. Physical education should be recognized as an entity, an administrative phase or branch of education having specific purpose and methodology, an accepted philosophy, and with foundation in the biologic sciences; but not merely because it is required by law, not for health reasons, nor for the sake of recreation alone. Education is the central theme and ultimate goal.

2. Aims and objectives, evolved from underlying principles and the known values of physical education, should precede and guide the development of a program.

3. Physical education, as much as any subject, requires a planned program, one specifically designed to produce the outcomes implied in the aims and objectives.

4. In addition, definite criteria which further guide program planning should be established and followed.

5. The selection of activities and methods should be determined by the principles and aims of physical education.

6. Physical education should be objectively planned, organized, and conducted with a view to maximum attainment through the educative situations with which socialized activity is so richly endowed.
7. Health and exercise should be regarded as by-products incidental to wholesome participation in educative physical activities that are carefully selected and wisely taught.

8. Athletics should be recognized as an integral unit of physical education; the director or supervisor of physical education should be the director of athletics; and all coaches should be appointed to the faculty in the same manner as other teachers.

9. To apply the principle of learning through self-activity to the fullest extent, pupils should have opportunities to study as well as practice physical education.

10. In elementary schools of traditional organization we should look increasingly to the classroom teacher for intelligent leadership and instruction of pupils in physical education. The specialist should be truly a supervisor.

11. Happiness or satisfaction on the part of the pupil should be given greater stress as an outcome of physical education.

12. Physical education should be the planning and preparatory period for the out-of-school activity-life of the pupil. To that end, it should be used less and less for exercise purposes, but more for instruction, skill development, planning, study, and discussion.

13. The application of activity to individual needs should be accepted as one of the fundamental principles of program development. A corollary is homogeneous grouping.

14. School programs in physical education should be extended increasingly to include the after-school activity-life of the pupil.

15. The abilities and capacities of pupils should be tested in order to obtain criteria for classification and for the prescription of activity. Subsequently, pupil-achievement in physical education should be measured.

16. The program in athletics for both intra and inter-school competition should be guided by the principles and aims and objectives
of physical education. Its content should be educative, and education should be the outcome. Athletics that exist primarily for the entertainment of the public or for advertising the town cannot be justified in the purpose of the school."

The above standards represent a comprehensive summary of what is being done by leaders in the field of health and physical education to provide for a job analysis. Any teacher must establish in his mind a basis for selecting activities. This basis must be supported by principles which underly the selection of methods. The above quotation from Dr. Ireland's article does not exhaust the possibilities of principles and methods, but for the present time it does seem to be very efficient and helpful.

The State Department's Point of View

Just what will be the nature of the new society of the future, it is impossible now to determine. Due to this fact, it is obvious that the planning of an educational program of physical activities must involve great flexibility and breadth. It would not be wise to establish specific, limited objectives and then build a program in terms of these. In order to formulate a program to meet the needs of individuals there are five major considerations involved which must be kept in mind:

1. There must be specific and measurable objectives, couched in terms of the needs of the future society.

2. There must be content elements or a curriculum established, made up of activities which offer good probability of achieving these objectives.

3. There must be approved teaching techniques which will insure that the average individual will profit largely from exposure to these activities or subjects.

4. Valid and reliable tests are needed to determine whether or not results are being accomplished by the methods used in terms of objectives.

5. Effective administrative standards and procedures must be evolved to insure adequate facilities, leadership, and integration of subject matter.

All business transactions are based and controlled by their respective markets. Schools are based on objectives and depend on them for direction. Objectives must be measurable else one cannot tell whether or not they have been attained. These should include all of the general aims applying to the entire field and range of physical education. There is also a necessity for specific objectives outlining the desired outcomes in each of the school levels in terms of each individual's needs. Finally, there should be still more detailed specific objectives for each of the several activities that are included in the program for a given school level.

The content of the curriculum in health and physical education should include subject matter that has been selected in such a manner as to achieve the objectives of
the school. In view of progressive education the "core curriculum" or "core program" seems to be the best solution for this problem. This would provide for the basic essentials to be distributed in such a manner as to give a "balanced diet" of activities made up of typical units distributed over several major fields. This "core curriculum" must be used in connection with "electives" in order to meet the interests and capacity needs of children. The "core curriculum" with its "electives" may be distributed over at least five major divisions, including aquatics, gymnastics, rhythms, individual sports and team sports. A balanced program may be assumed to consist of selections from each of these major fields. In this connection Mr. LaPorte states that, "If the activities are properly selected and if each school level includes appropriate activities from each of the above major divisions; and if the teaching is well done; there should be good assurance that the objectives of the program will be reasonably well achieved because the program is a balanced one."

Eventually the school will be faced with two major objectives in the form of obligations to the community. This is due in part to the increasing development of leisure time and in part to the emphasis on avocational hobbies. The first is to provide adequate preparatory instruction for citizens of all ages, involving both vocational and avoca-

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tional training. The second is to provide adequate community facilities, probably in connection with the present school plants, for the adequate expression of the avocational skills which are presented in class instruction.

Some schools are being used for public recreational service and rightly so since they are constructed and maintained by society to set the standards for the guidance of youth. Schools also have an extensive educational curriculum which with slight modifications can provide all of the essential training for every kind of hobby. The school is in a position to reach the entire community. It is well to keep in mind that due to the uncertainties of the actual nature of future society, physical education must provide a broad, flexible, and adjustable curriculum that can be adapted from time to time to suit changing conditions.

A modern program of health and physical education in Ohio has three main divisions. These are:11

"I. The School Health Service. The school health service includes the operation of those agents or agencies aiming to improve or protect the personal and environmental health conditions of school children. The following functions are operative in a health service:

1. Health examinations by physicians and dentists.
2. The reference and follow-up program for the correction of remedial defects.
3. Immunization programs against communicable diseases.

11Ohio Health and Physical Education Series, Volume III, pp. 11-12.
5. Special classes.
6. First aid and safety provisions.
7. The hygiene and sanitation of the school plant and equipment.
8. The health of teachers, custodians and others on the school staff.
9. The hygiene of instruction.

II. Health Instruction. Health instruction is the sum of the instruction given within the curriculum, which has for its aim the improvement of the health conduct of the individual. Many subjects, departments, and other phases of school life contribute instruction in health. Learning about health takes place throughout the school day. Health conduct is made or modified in response to the health conditions and teachings at school, hence the entire school staff and plant must be seen as responsible in varying degrees for its wholesome development.

More specifically, however, the health instruction phases of this program are those involved in a specific course of instruction in hygiene or healthful living. Health instruction can be given directly as a unit element within the curriculum, or it can be offered in integration or correlation with other subjects. Reliance entirely upon this latter method is unsafe. Specific and graded instruction in the subject matter of healthful living is necessary.

III. Physical Education. Physical education is the contribution made to the complete education of an individual through the psychomotor or large-muscle activities. For school purposes, physical education includes such activities as athletics, rhythmic, games, sports and related activities. The scope of this phase of the program is broad and includes all interscholastic athletics, intramural sports, the service classes (to be described later), and the corrective or individual work. Both the boys and the girls programs are, of course, included.

These three divisions may be integrated with each other completely and often their functions overlap. No sharp distinction can always be made nor is such a distinction desirable. They all deal with the education and the health of the child.
The changing demands of society are constantly effecting changes in the school curriculum. A course of study reflects the economic and social status of the community. The forces that are responsible for the successful adjustment of an individual to life about him are the controlling factors which determine the content of the program. This suggests that the curriculum must never remain in status quo since the results would mean stagnation. Progressive modern education realizes these consequences and therefore, encourages changes and modifications from the older type of schools. Health and physical education was once considered a frill but now finds itself regarded on an equal basis with the so-called academic subjects. Its place in the curriculum may be rightly judged in terms of its relation to society's problems and the nature of man.

The objectives of the program of health and physical education in terms of education have been listed on page 33 Chapter IV. It is well to keep in mind that there are three divisions of this program and that each division contributes in part to the general education of the individual. The objectives of health service, health instruction and physical education will all relate, in some way, to those larger aims of health, worthy home membership, development of the tools of learning, ethical character, citizenship, worthy use of leisure, and vocational training which are the aims of education as a whole.

If a school's program is to be an interpretation
of the economic and social world, in and for which it exists, then certain conditions should be considered which require the development of health and physical education.

It has been called to the attention of the reader on page 3 that many problems in modern life look toward health and physical education for their solution. There are unmistakable signs of biological degeneration in adulthood due, principally, to inactivity and all that the sedentary life entails. Our labor saving devices, bodily comforts and improved means of transportation and construction are making less and less the need for muscular work. By sedentary living, we mean inactivity, over-eating, worry, and decline of the normal active human machine. Health and physical education makes a concrete contribution here through the health service in detecting deviations from the normal, health instruction in educating in hygiene, and physical education by providing skill at games and sports.

The sciences of psycho-pathology and mental hygiene provides us with statistics which indicate that it is becoming increasingly more difficult for people to make desirable adjustments of personality so necessary to life in a social world. Modern life means competition and strain. People are constantly trying to outwit each other in order to survive. Further evidence of this can be found in a study of present day wars, political disputes and crime. The lessons of play have always been the lessons of sportsmanship, of honesty, of fairness. The program of health and
physical education makes provisions for the proper education of these things.

Most of the difficulties that people have, arise out of their contacts with people and not with things. Most of the problems arise in the use of leisure time. Crime can be partially explained by the old saying, "The devil finds work for idle hands to do." Working hours and days are becoming fewer. "Sit down strikes" are common. Health and physical education has the challenge to educate for this leisure. It can provide each individual with a skill in sports of all kinds that may be used not only during the vigorous days of youth, but that may be enjoyed to the fullest during adulthood. This type of education for leisure is practical and should be encouraged.

Our government and our social life is composed of the democratic ideal. Their principles oppose a dictatorship. The people of America do not have to think and act alike. Each individual should be counted as a person and treated as such. W. H. Kilpatrick once said, "The world, its institutions and its resources are man's and exist for man to develop and express him." This field of education provides a great laboratory in which to develop the idea that each child has an equal chance. To give the child greater control of his own intellect, his own emotions, and physical powers is the contribution of health and physical education to this ambition of modern education.

Public health in the United States today exceeds
that of any other country. This is not an accident, but rather something which has been an outgrowth from education. The continued protection of the nation against disease and degeneration depends upon the individual's reactions to public health betterment. We should educate the individual in wholesome living. Schools must accept the responsibility to teach the facts and aid the conduct of people so that public health will attain even higher standards.

Health and physical education is not a separate phase of education, but rather a definite part of education. All learning takes place through the physical senses and the latter compose the very foundation of the profession.

The Federal Office of Education reports that health and physical education, in this decade, is the fastest growing part of the curriculum. It is not to be thought of as extra-curricular. The Ohio Code of Laws calls for "credits and penalties" to be applied "for success or failure in physical education courses as in other school subjects." This suggests that health and physical education should be considered as teachable as other fields of a curriculum and its progress in the course of study be measured with the same precision as any other subject.

The general standards for health and physical education may be found in Ohio High School Standards, Ohio Department of Education. The standards for recognized high

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12 Ohio Health and Physical Education Series, Volume III, p. 15.
school programs are listed as follows:  

I. Time Allotment

A. Minimum of two regular class periods per week for all grades. Total minutes per week for any pupil shall not be less than 100.
(1) The State Department recognizes interscholastic and intramural athletic contests and practice periods as class periods when, and if, a certified instructor, is in charge. Hygiene or health instruction is also recognized as part of the 100 minutes.

(2) Schools having two forty-five minute periods per week may consider their time allotment the equivalent of 100 minutes per week, provided there is opportunity for pupils to play before or after school.

II. Certification of Teachers

A. Part-time teachers must have at least a minor in health and physical education written in on their provisional or life certificates. This minor is recognized only if secured in an accredited training institution.
(1) The State Department, Division of Teacher Training, issues an annual list of accredited Ohio minor and major training programs. Teachers holding credentials from colleges or universities out of the state must submit them to the State Department for approval.

(2) Athletic coaches are considered teachers of health and physical education and, as such, they must hold a certificate in the field. After 1935 no program will be

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13Ohio Health and Physical Education Series,
Volume III, pp. 16-18.
accredited unless the teacher
(coach) has a certificate showing
at least the minor in health and
physical education. All part-time
or full-time men and women teachers
(coaches) of health and physical
education employed after 1930 must
be duly certified from credentials
submitted from a college or univer-
sity accredited in health and physi-

cal education.

B. Full-time or special teachers and super-
visors must have completed a four-year
college or university course including
a major course of 40 semester hours in
Health and Physical Education in insti-
tutions accredited by the State Depart-
ment of Education.

(1) Completion of such a course entitles
the teacher to a four-year special
provisional certificate leading to
a special life certificate.

(2) The above regulation is not retro-
active and special provisional or
life certificates issued prior to
1930 will be recognized.

III. Facilities and Equipment

A. All high schools equipped with a gymnasium.

(1) If other indoor space, such as audi-
torium, armories, etc., are used
regularly by the school, they may be
considered as gymnasium.

B. A minimum outdoor play space of three acres.

(1) Because of unalterable conditions in
certain schools, this standard may,
on occasion, be waived.

(2) Three acres is not to be construed
as a desirable figure for play areas.
All high schools should have at
least 7 to 10 acres wherever possible.

C. Locker rooms and lockers of such type and
quantity as to offer a safeguard of per-
sonal property and to provide sanitary
and adequate dressing space for all classes.

D. Bathing facilities (showers) in sufficient
numbers for the largest classes, with hot
water, soap, and towels available during the school day.

IV. Program

A. A physical examination under the supervision of a licensed medical doctor, for all pupils at least once during the four years; and an annual examination for all pupils representing the school in interscholastic athletics.

B. Health instruction for all pupils given at least one period per week for at least one year during the four.

C. Any school represented by teams in interscholastic athletics a member in good standing of the Ohio High School Athletic Association.

V. Credit

A. Academic credit to the extent of one full unit given to all pupils as a result of the successful completion of the four-year course.

(1) This full unit of credit may be given in portions of not more than one-fourth of a credit a year and may be within or in addition to the 16 required for graduation. Some Ohio colleges will now recognize the unit within the 16--others will do so as more high schools offer approved four-year programs.

(2) This standard is in accordance with Section 7721 of the Ohio School Laws which states that "credits and penalties shall be applied for success or failure in physical education courses as in other subjects."

The teaching of health and physical education in the elementary school is taken care of by the classroom teacher just as she would other subjects. Since most secondary schools are departmentalized, special teachers are necessary. In many small secondary schools it is impossible to retain a
teacher whose only function is that of teaching health and physical education. In many instances this part-time teacher is required to teach a wide variety of other school subjects. Because of this, a teacher with a minor in health and physical education from an accredited college should be obtained.

Special or full-time teachers are desirable in junior and senior high schools that are large enough to retain them. Any and all coaches of athletic sports are considered by the State as teachers of health and physical education and must be appropriately certified as such.

"Teachers of health and physical education in Ohio are subject to the same general certification regulations as are teachers of other subjects."1

The following summary will suffice to indicate the status of teacher certification in health and physical education in Ohio:2

1. To teach health and physical education part-time a teacher must have at least the equivalent of the standardized minor in the field.

2. This minor must be earned in a college or university accredited by the State Department of Education.

3. This minor must be written in as such on the state provisional or life certificates.

4. To teach health and physical education full-time as a special teacher, one must have at least the equivalent of the standardized major in the field.

5. This major must be earned in a college or university accredited by the State Department of Education.

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1Frank E. Wilson, State Department of Education, State of Ohio, Columbus, 1931.

2See Ohio High School Standards for further explanation.
6. This major must be written in as such on the State provisional or life certificate.

The school health service includes the operation of those agents or agencies aiming to improve or protect the personnel and environmental health conditions of school children. The boards of education are responsible for the administration of the school health service. The actual work of the health service, itself, should always be under the direction and supervision of the school physician. "Some one reputable physician should be in charge of the program of health service and no health examination or nursing program should be instituted without a duly constituted medical authority in supervisory control." The important thing is to centralize the authority in school medical matters.

"Boards of Education have the right to appoint school physicians. This right is granted to Boards by Section 7692 of the General Code which states that "Each and every board of education in this state may appoint at least one school physician; two or more school districts may unite and employ one such physician. . . . Said school physician shall hold a license to practice medicine in Ohio. . . . Such boards (of education) may delegate the duties and powers herein provided for to the board of health within the school district . . . ."

Provisions for safety are an integral and important part of the school health service. The health coordinator,
the physical education teacher, or other people actively interested in the health program should assume a major share of duties in this connection with the responsibility, in the last analysis, falling upon the principal or superintendent. This will also include a first aid program.

It has been called to the attention of the author, through his informational sheets, that a list of suggestions be compiled which might bring the State Department of Education in closer contact with the various schools of Ohio. In this way it is hoped that local problems may be solved. The items appearing in the following list are in no sense to be considered complete nor possible in all situations, but they do present possibilities.


2. Furnish pictures, postures, and pamphlets showing girls in other activities besides basketball.


4. Suggest what ought to be done in view of each local situation, as a reasonable requirement for all. Furnish outlines to be used in arranging the health and physical education activities.

5. Assist each school in planning the year’s work.

6. Put health and physical education on a par with other academic subjects.

7. Recommend more rigid standards with respect
to accrediting and planning of school plants. Make the course of study more definite and more suitable to the needs.

8. Send material periodically on all current physical education activities and methods of teaching which are being stressed at that time.

9. There is a need for more definite regulations concerning what is wanted.

10. Establish some maximum for interscholastic competition so that the tail does not wag the dog.

11. Contact physical education teachers more often.

12. Use the radio to help educate the public as to the merits of health and physical education.

13. Supply speakers and leaders to explain the objectives of health and physical education.

14. List schools that are carrying out a well balanced program that would be helpful to visit.

15. Organize materials for teachers so that it will be more systematic.

Health Examinations

A reputable physician should be in charge of the health examinations and nursing program. If the school board is unable to appoint a school physician the responsibility of this phase of the program rests with the local board of health. The Ohio State Department of Health recommends that wherever feasible, the local health commissioner be named the school physician.
Boards of education should provide an annual health examination for every pupil in school. The law (Sections 7721-2 and 1261-26) authorizes the coordination of such health supervision with the work in physical education and, further, permits the school physician or the boards of health of a city or general health district to provide this medical and dental service. Records for all examinations should be made on standard forms, in ink, and are for the use of boards of education, boards of health, or health officers only. They are not, according to law, to be opened to the general public.

The specific objectives of a health examination are:

1. The detection of physical and mental defects.
2. The detection and exclusion from school of cases of communicable disease.
3. The determination of physical conditions as a basis for assignment to activities in the physical education program, for participation in general school activities, and for the formation of a program leading to the correction of remediable defects.

An annual health examination for every boy and girl and a seasonal examination for every athlete is the recommended or ideal standard. The content or nature of the examination will vary with local circumstances. It is necessary to establish minimum essentials so that most of

the important items are included. They are: 18

1. A personal history of disease and defect
   with such items as date of discovery,
   immunization record, and defects remedied
   noted.

2. A thorough examination of heart and lungs.

3. A determination of nutritional, weight
   and growth status. 1

4. An examination of vision and hearing.

5. An examination for orthopedic defects.

6. An examination for glandular condition.

7. An examination for dental defects.

8. An examination on history of reproductive
   functions and conditions.

9. An examination for skin disorders.

10. An examination for nervous conditions. 8

The examination program should be no mere routine
   procedure but a vital experience. It should be organized
   and administered so that each and every child approaches
   it eagerly.

Defects and physical conditions should be deter-
mined before students are assigned to their physical education
work. Two examinations are necessary to procure adequate
information. A physician should administer one to determine
the presence or absence of disease and organic and functional
disturbances. The second examination should be given by a

18Ohio Health and Physical Education Series,

1Recent scientific evidence indicates the necessity
of modification of the usual plan for judging underweight
children. See The Child Health Bulletin, Vol. 6, No. 2,
March, 1930, American Child Health Association, New York City.
trained physical educator to determine body mechanics. These two tests should be supplemented by tests of physical capacity and fitness.

Various groupings will arise from these examinations without which the physical education program cannot be built to meet adequately the needs of the child. These examinations will sort out: 19

1. Those who may safely venture into any form of activity.

2. Those who may attempt an average routine.

3. Those who must be watched and checked as they become too enthusiastic about activity.

4. Those who may exercise only mildly but who need body education.

5. Those who may exercise actively but who need corrective measures for re-education of the body.

6. Those who must be so safeguarded that they are practically in an invalid classification. 2

No examination can be most useful unless adequate records are kept and used. The State Department of Education recommends the health record card which is a part of the Ohio Pupil's Cumulative Record. The Ohio Department of Health has prepared and recommended a similar record card which may be used in schools. These two cards represent workable models. Many schools prepare their own using some standard record card as a basis.

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## SCHOOL HEALTH RECORD

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**CODE:** 0-Satisfactory; oo-Corrected; X-Observation; XX-Attention; XXX-Emergency
### SCHOOL HEALTH RECORD - continued

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Form SR-19-1928 – Stoneman Press, Columbus, Ohio

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Prepared by Ohio Dept. of Health | Prescribed by Supt. of Public Instruction
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State of Ohio
Department of Education
Form 29.

NOTE: If desired the state approved health card may be used if included in this folder, instead of using this space.
All health records should be available to those in position to make the needed adjustments. It is recommended by the Ohio Code that the private health records not be made public for obvious reasons.

A study of the medical examination blanks, as used by various schools, shows them to have a uniformity of content although they differ considerably in their form, size and arrangement of material. The information most commonly covered is as follows:

1. Abdominal abnormalities
2. Blood condition
3. Body cleanliness
4. Bones
5. Breath
6. Feet
7. Glands
8. Hearing
9. Heart
10. Height
11. Immunization for diphtheria
12. Immunization for scarlet fever
13. Immunization for smallpox
14. Immunization for typhoid
15. Lungs
16. Muscles
17. Nasal passages
18. Nervous system
19. Nutrition
20. Posture
21. Speech defects
22. Skin
23. Teeth
24. Tonsils
25. Tuberculin test
26. Vision
27. Wearing glasses
28. Weight

It is difficult for the small school to meet educational needs in physical examinations from lack of proper facilities, equipment, finances, and trained workers. Under such circumstances local public health agencies should be called upon for assistance. In some communities the local physicians rotate in donating their services to the school at the opening of the new year. Other schools furnish a form which the family physician fills out but this is not satisfactory since many parents will not undertake this expense and all children are not examined.

There is much that the school teacher can do without the aid of a physician to ascertain the health condition of pupils and this much all schools should require. J. F. Rogers offers an excellent guide for this work in his pamphlet, "What Every Teacher Should Know About the Physical Condition of Her Pupils." This may be obtained by writing for pamphlet No. 68, U. S. Department of Interior, Washington, D.C., 1936.
It gives full instructions for physical examinations that may be given by school room teachers.

School boards should not expect physicians and nurses to give their time without some compensation. Boards should pay for services received. It is unfair for the physician to be asked to donate his services unless other citizens of the community likewise are asked to give their time and money in service to the school. A school health service, with a physician in charge, is important and necessary and should not be placed on a charity basis.

The school physician, the school nurse and the teacher in charge of health and physical education should assume the following responsibilities toward the medical examinations:

**The School Physician**

1. Conduct periodic health examinations of school children.

2. Examine the members of interscholastic athletic teams.

3. Examine children registering for first time in elementary and secondary schools unless such students submit evidence of recent examination.

4. Re-examine students upon request from school authorities.

5. Examine teacher and normal school applicants; also teachers or other school officers returning from leave of absence on account of illness.

6. Examine all children applying for work certificates.

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7. Check all requests for permission to be excused.

8. Keep all examination records up to date and in good condition. The health record card with its notations should follow the pupil through the elementary grades to the high school.

9. Administer the follow-up program for the correction of remedial defects, i.e., notices sent to parents; home visitation by nurse or teacher; reporting to family physician or dentist.

10. Administer such immunization programs as may be necessary for the control of certain communicable diseases.

11. Act as counsellor or advisor to school authorities and parents in matters pertaining to the health and physical welfare of school children.

12. Give health lectures to teachers, parents, and children.

13. Administer the inspection pertaining to the hygiene and sanitation of the school plant and equipment.


15. To make an intensive examination of and recommendations for the mentally retarded or undernourished and others with serious handicaps.

16. To assist in the administration of the physical education and health instruction program.

The School Nurse

1. Assist the physician with periodic health examinations.

2. Conduct the necessary follow-up program for the correction of remediable defects found in school children; i.e., notices sent to parents, home visitation, etc.

3. Instruct and co-operate with teachers
in their duties relating to the health of pupils.

4. Assist the physician by inspecting for symptoms of communicable disease, and for skin and scalp infections. Inspect the hygiene and sanitation of school plant and equipment such as heating, lighting, ventilation, cleaning, water supply, seating adjustments, toilets, cafeterias, etc. Reports of results should always be made to appropriate authorities.

5. Assist teachers with health instruction through talks, discussions with teachers and demonstrations.

6. Discuss the health of children with groups of parents.

7. Render first aid in emergency cases and give first aid instruction to teachers and students.

8. Keep an accurate record of all defects remedied by inserting the proper notations on the examination card.

9. Assist the physician with immunization programs.

10. Attend teachers' meetings and institutes.

The Health and Physical Education Teacher

1. To assist the physician and nurse in making health examinations by recording findings, doing simple measurements of height, weight, vision, hearing and posture and recording deviations from the normal for reference to the physician.

2. To cooperate with the nurse in arranging schedules for examinations, notifying pupils and physicians of appointments, arranging appropriate follow-up procedures.

3. To interpret to parents the plans, procedures, and findings of the physician through printed material, letters, interviews and talks.
4. To base all assignment to physical education activities including participation in competitive sport upon the results of a physician's examination.

5. To assist students to make appropriate personal adjustments and compensations to the findings of the physician and nurse.

6. To conduct a scientific program of individual corrective exercise or restricted physical activity for those students found in need of such.

7. To serve as the health counsellor or on the school health committee rendering service in all matters relating to health conditions in the school.

Because of differences in training, health and physical education teachers cannot perform the same functions as physicians and nurses. They should not be expected to do so. The health and physical education teacher is essentially an educator rather than a diagnostician, hence the following limitations of his work in the school health service should be recognized:

1. Under no circumstances should the teacher make a diagnosis of any disease or ailment.

2. The teacher should give no test or use any instruments to make differential diagnoses except in those instances where assistance to a physician or nurse in charge is necessary.

3. The allocation of students to classes in individual corrective exercise should be done under the supervision of a physician.

4. Mass corrective drills or corrective exercise without a differential diagnosis and individual prescription of exercise or therapy are unscientific."

The examination which the physical education department gives is concerned chiefly with body mechanics. Relative
measures of height and weight indicate only growth, yet normal growth is important and it is well to measure all pupils for a record of this condition. Since posture is believed to have a definite relation to physical fitness, it is desirable to compare students with recognized standards. All students with poor posture should be assigned corrective class work. Since the most common defects of the foot are amendable to correction by exercise, it is advisable to give a thorough examination. The examination must be a careful inspection and tests of function.

Lack of funds does not deter the teacher of ingenuity. He prints his own examination blank by hand and has his students assist in making copies. A prepared wall space will serve as a stadiometer, a window pole for a posture gauge, his own two eyes, reinforced by his intelligence for his inspection machinery. The village health department or grocery store will permit the teacher to use the scales for weighing.

The task of following up the information compiled by the medical and physical examinations in the health interests of the students belongs to the health service, the physical education department and the school room teacher jointly. It is not enough to notify parents of defects discovered although this is an important function of follow-up work. The personal conference is necessary to guide the present health procedures into correct channels for permanent life habits.
One health conference a year for every student should be the absolute minimum; two a year, for the new entering student; four a year, for all who are physically unable to participate in the regular physical education program; and one a month, for those who are too seriously handicapped to participate even in restricted work, but must report instead to the rest room. All conferences do not need to be private: students needing help on identical subjects might well be grouped into small conference units to save the teacher's time and to gain the stimulus of group discussion of their difficulties.

Tests most commonly used in a physical education program may be roughly grouped into two classes, physical capacity and achievement tests. The first one is used to classify students as to their capacity to achieve, the second to classify as to actual achievement and progress in achievement. The physical capacity tests are used to group children according to their abilities to assimilate physical training.

Strength tests are of importance because they give valuable information as to vital functioning since "practically every change in the condition or functioning of the vital organs has a corresponding change in the conditioning of voluntary muscles." It has been established objectively that "strength tests, when scores thereof are statis-

21 Lee, Conduct of Physical Education, p. 264.

22 F. R. Rogers, "The Significance of Strength Tests in Revealing Physical Condition", Research Quarterly of American Physical Education Association, October, 1934, p. 43.
tically combined . . . reveal organic fitness or lack of fitness with a remarkable degree of validity." These tests are valuable in determining muscular ability and, through that, indicating conditions of body functioning, but they should not be looked upon as tests of essential body strength.

In all probability the best known test in the physical education field is the "Rogers Physical Fitness Test" which is devised for both sexes from ten to twenty-three years of age. It is a combination of tests with the performance ratings grouped into an index, known as the P.F.I. -- Physical Fitness Index. This index is derived by combining the standards of performance in the following: grip tests -- both right and left hand -- push up, pull back, back lift, leg lift and breathing capacity. These standards are grouped by age, weight and sex.

The cardiac functional tests are designed to give an indication of physical condition through response to muscular activity. Pulse rate tests, pulse rate return after exercise tests, and the Schneider cardio-vascular tests are cardiac functional tests. They are important because by their use students who should be referred to a physician before entering upon physical activity assignments can be quickly sorted out for immediate attention. The trained physician then

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23F. R. Rogers, "The Significance of Strength Tests in Revealing Physical Condition", Research Quarterly of American Physical Education Association, October, 1934, pp. 43-44.

24These tests are described in Frederick Rand Rogers, Physical Capacity Tests, published by A. S. Barnes and Company, New York, 1931.
examines the child and gives the actual diagnosis upon which the teacher bases the final activity assignment decision.

"Motor ability tests deal with that ability in the manipulation of the body which is more or less general, which is more or less inherent, and which permits an individual to learn motor skills easily, and to become readily proficient in them. Because of the implication of general ability rather than specific ability or achievement, motor ability tests should be expected to be better measures of capacity than are single achievement tests."\(^25\)

A well known motor ability test is the Sargent Jump. It consists of a jump straight up into the air. A disk measures the height which the top of the head is able to attain. From a recent study of this test made on high school girls of St. Paul, it is shown that the jump alone is almost as good as the combination of jump and age for predicting track and field points, and that a consideration of height and weight adds nothing of significance.\(^26\)

The McCloy Test is a "test of general innate motor capacity." It does not attempt "to measure specific skills and abilities." From this test, McCloy proposes a General Motor Achievement Quotient which is \(100 \times \) the general motor ability score divided by the general motor capacity score. A person having a general motor achievement quotient of 90 can be told that his achievement is 90% of what it should be.


if he was developed as well as could be expected for age and general maturity. The details for the giving of this test are available in published form. 27

Prognostic tests predict not only the possible development a person may make in physical ability, but also the capacity he may have for physical activity. By means of these tests teachers should be able to direct students intelligently towards the acquisition of skills which they will be able to do well.

After pupils are classified for activity by the use of some classification formula, it is then necessary to ascertain their ability and to measure their progress within the activity assigned. For this purpose achievement tests are used. To measure achievement in general there are tests made up of combinations of abilities. For example the Neilson and Cozens Achievement Tests are designed for both boys and girls from ten to eighteen years of age. They cover thirty-three different tests and may be used in any combination. The teacher may select any ten to make a decathlon or any five for a pentathlon. The most desirable groupings are made by selecting an assortment from each of the following types of activities; running, throwing, kicking, jumping, pulling, pushing, and catching. These tests are to be used in conjunction with the age-height-weight classification chart and the achievement scales which have been

developed by the originators of the test.  

Tests that recognize or show up symptoms are diagnostic tests. The physical Achievement Standards of the National Recreation Association and the Neilson-Cozen tests may be used for diagnosis. Medical and physical examinations are also diagnostic tests. According to Bovard and Cozens:

"Diagnosis is a very difficult function of the teacher and those who wish to construct diagnostic tests, must aim at a complete analysis of all the skills which are possible results of a given unit of work. Each of these skills must be measured and interpreted on the basis of norms which are available for individual performance in contrast with group performance. Further than this, a remedial program must follow the diagnosis. Remedial teaching must be based upon known deficiencies. Without actual knowledge, remedial teaching is a hit or miss proposition."  

Appraisal tests may be given every three years. For example the Sargent Jump test which is "a test of the individual's available horsepower as related to his size and weight."  

The Johnson Test may be used as another example which employs stunts in its general program. Still other

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28 For full description of each test, directions for giving each, scales for marking achievement in each, listed in eight different classifications, and for suggested combinations of activities to make up a battery of tests see Neilson and Cozens, Achievement Scales in Physical Education Activities for Boys and Girls in Elementary and Junior High Schools, Copyright, 1934, A. S. Barnes and Company, New York.


appraisal tests are used before permitting students, who have been absent because of colds and influenza, to re-enter the activities of the school. These tests are designed to determine if they have sufficiently recovered. The Pulse-Ratio Test may be used by a teacher who wishes to check on the probable condition of the heart.

Although a testing program which is used for the purpose of classifying students is important and desirable, it should never become the end, the physical education program itself. In other words the giving of tests should not fill up the major class time except on special occasions when testing is necessary. It should also be noted that tests should not be used to compare the rating of one child with that of another. They should be used only to compare a child's present rating with his own past record.

Tests used to measure achievement should be given at least three times within the term; at the beginning to show the starting point for each pupil, during the course to mark progress and to motivate before the end, and at the close to show the amount of progress which has taken place.

Homogeneous groupings have always been in use throughout the general education system, but it is only in recent years that physical education has come to insist upon the use of such homogeneous groupings as are advantageous to its own work. Grouping by grade placement alone is no longer acceptable: it "favors the older, heavier, and stronger individuals as the variance in height, weight and age within a grade is
considerable"; grouping by age alone, also will not do since "there is much variability in height and weight within each age group"; and grouping by weight alone is not advisable because "it is not known how much of the weight is fat or bone, and how much is muscle" and "there is a wide variation in maturity at a given weight."\textsuperscript{32} For fairness in competition and for interest in class work, pupils should be classified according to physical capacities. Medical examinations and physical capacity tests furnish the basis of this classification.

The large schools use a four-group plan of classifying; the average school, a three-group plan; and the small school, a two-group plan. The four-group plan calls for those who receive a P.F.I. rating of more than 15% above the average for the entire group to be classed as A; those who range from this average to 15% above are classed as B; those who fall in the range from average to 15% below average are classed as C; and those who are more than 15% below average are classed as D. The pupils in group A are permitted to choose the type of physical education work they will take: they usually prefer either leadership in school hour classes or leadership and participation in after school activities; pupils of groups B and C are placed in regular required class work, but in separate sections and those of group D are

\textsuperscript{32} Neilsen and Cozens, op. cit., pp. 4-5.
assigned corrective work which is given to each daily. 33

The three-group plan suggests that the 15% to 25% of all in grades 7 to 12 who have the lowest physical fitness index be assigned special class work or daily rest and that the highest 15% to 25% be permitted to elect their activities while those in the middle group be assigned the regular prescribed courses.

The small school does not have a large enough enrollment to warrant the three-group plan. In such schools those children who receive the lowest ratings in the examinations and tests should be grouped into one class for special work, and the others into a second class for regular work.

For elementary and secondary school children, one performance scale is not sufficient to classify in achievement since height and weight vary markedly in children of a given age and in a given grade. Up to ten years of age, however, the three factors of height, weight and age are sufficient basis for classifying. Beyond that age, sex should be recognized as a fourth factor. The public schools of Oakland, California, have developed a classification chart using grade, age, height, and weight as the basis for grouping for ages ten to eighteen. This chart in its original form is the one used as the basis of the achievement scales devised by Neilson and Cozens.

Types of Health Instruction

The principal aim of health instruction is the development of intelligent health conduct. It is desirable, through the teaching of health, to provide each individual with information concerning his health, its influence on him, and its influence on the best interests of the community. These interests are usually thought of in terms of protection against disease, or the warding off of ill-health, but in addition it includes teaching how to live so as to develop to the fullest organic strength and wholesomeness of mind. Health is more than disease protection. "To know how to avoid one of the common diseases is in itself important but a complete program of health instruction will include all the problems of growth, development, and adjustment within the environment of the normal student." 34

If education is life, and if it is society's desire that children shall have more abundant life, school authorities must give attention to the health of the children both in and out of school. It is the business of the teacher to protect and promote the health and morals of the children committed to his care during school hours, as well as to instruct them in the various school subjects.

Every school should have some well defined program of health even though the teacher may not have had special training for the work and the services of a school nurse are

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34 Ohio Health and Physical Education Series, Volume III, p. 126.
not available. Under these circumstances the teacher should consult some wide-awake, up-to-date physician, who will be glad to give advice and references to valuable books on this work.\footnote{J. F. Anderson "A Need in Rural Health Education," \textit{Journal of Health and Physical Education}, March, 1936, p. 140.}

The informational sheet reveals that some schools have placed the duties of a modern graded program of health instruction on physiology and hygiene. The latter courses are offered to only one grade throughout the four years of high school thus no provision is made to provide health instruction for the remaining three years. In any event the teacher of physiology and hygiene should understand and apply the principles of today's educational philosophy and psychology. It then becomes necessary for the health lessons of a graded curriculum to be based on principles.

The health conduct of individuals is the ultimate criterion for judging the success of the teaching program. It is well for students to possess a great deal of knowledge concerning health, but if they never use it, or only partially so, the information is useless and the individuals have not helped society. There is no point in it for boys and girls of high school age to smoke or drink even when they know the consequences.

The "felt-needs" of students should form the basis for the selection of subject matter. The actual problems of life that are experienced by students will stimulate the pupils to seek the answers and will insert interest automatically into the search for information. The problem now arises, do the needs of the students always come to the front,
spontaneously or should the teacher bring them out as eventual problems of youth. In many instances the lesson plans can be the result of data received from the students' lives with the data known to the adult serving as a check, and as additional material, to complete the former. People will not think vitally about a problem unless that problem is vital to them. "The immediate problems of living are vital to the student, they are a part of his life, and the study of solutions to those problems is conduct forming."^{36}

Learning about health proceeds from the particular problem to the generalization, from specific interests to broader relationships.^{37} Learning about a particular thing takes place by specific experiences with particular subjects. For example a person may be interested in the condition of his heart. He learns by counting his pulse that it only beats 68 times a minute instead of the average 72. He immediately asks why this difference exists. This may serve as a key to a wider study of the structure of the heart, its functions, abnormalities, and its proper care.

Health subject matter should be arranged by life functions rather than by systems of the body. Textbooks contain information arranged in body or life systems and it

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^{36} D. Oberteuffer, "Personal Hygiene for College Students", Teachers' College, Columbia University, No. 407, New York City, 1930, Chapter 2.

^{37} Ohio Health and Physical Education Series, Volume III, p. 128.
becomes necessary to study the Respiratory System, its structures, before the question of pneumonia can be explored.

It is impossible to plan and carry out a satisfactory health program unless one understands what should be done, knows the best methods of reaching these aims, and has the necessary equipment, materials, time and money. Modern educational philosophy is undergoing many changes and modifications and therefore we can expect the field of health instruction to follow. When stating the principles of health education it is necessary to keep constantly in mind that they must be progressive.

Health is really not a subject or a special skill, but rather the condition of a person or a desirable way of living. It is really connected with all the things we do, therefore, it cannot be separated into one category. Health seems to be the center or key to all forms of action. The degree of efficiency by which we act or react is directly related to health.

"The health program should be a cooperative undertaking between the federal or state and local agencies interested and concerned with health, various members of the personnel of the school, the pupils, and other local educational agencies especially the home."38 All of the above

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organizations and individuals are concerned about the health of students, therefore, a wise educator first finds out who is available to aid and what particular service they can best render. He should also organize a systematic play to work in cooperation with them to do such things as get the drinking water analyzed, provide food and clothing for needy children, quarantine people with contagious diseases, provide adult education concerning healthful living, equip a better playground, or provide medical attention for needy children.

"The Health program should not arbitrarily be divided into distinct, separate divisions or subjects such as health instructions, physical education, mental hygiene and health service."\(^{39}\) The basic purpose of schools is to help everyone live the richest and best democratic life possible. The old formal type of education is taboo in this progressive era. Modern times require a more effective means of discovering and providing for the particular needs and interests of pupils. They need methods to help them grow in self-directed and more abundant living and for gaining the cooperation of all the other educational agencies in the educational process. Students should also have a greater integration of all experiences.

in school or elsewhere which promote the development of interests, attitudes, skills, habits, and meanings favorable for healthful living should be considered integral parts of the health program."\(^4^0\) Health is not a periodic experience such as going to a movie, the story of which, can be forgotten as soon as you get home. It is a continuous lifelong process or condition which must be carefully observed.

The school must think of health in terms of the total situation or span of life and not merely the six or seven hours when pupils are under its supervision. Many ideals and desirable practices which are created during school hours are wiped out and lost before supper on account of a faulty home environment. The answer to this problem lies in the complete cooperation of all agencies and persons involved to make their particular contribution for the promotion of happy, healthy children and community life.

"The aims of the health program should be definitely stated in terms of such things as services and desirable pupil reactions in habits, attitudes, skills, and understandings."\(^4^1\) Definite, specific aims are invaluable in order to determine satisfactory methods, promote integration, limit the scope of activity, and evaluate results. Pupils should continuously keep their bodies clean and clothes neat, wash


\(^{41}\) Ibid., pp. 28-31.
their hands and comb their hair before eating, stand and walk correctly and practice other health habits daily.

"All health activities should contribute to the achievement of other basic aims of education such as capacity to think, mastery of the tools of research, ability and desire to share and cooperate, socialization, and ethical character." \(^{42}\) Since there are many learnings which occur simultaneously, efforts should be directed towards continuing or following up these points learned in connection with health education, into other fields. Chemistry can contribute a great deal to the study of digestion of foods. Home economics may supply the much needed information concerning a balanced diet. This immediately suggests that the teacher of health must be a well rounded one who can see these possibilities and profit by them. As a result, the student, will in addition to reaching their particular goals, will seek to create the conditions must favorable for the achievement of other educational goals.

"The class teacher must understand many fundamental principles of health in order to stimulate and guide pupils satisfactorily." \(^{43}\) In order to stimulate and guide boys and girls, the teacher must be prepared and thoroughly understand the elementary principles of such things as first-aid, sanitation, nutrition, ventilation, digestion, health habits,


\(^{43}\) Ibid., pp. 28-31.
correct posture, personal and community hygiene, care of the eyes and ears, play and other recreational activities, etc. This type of a background will help the student make the necessary adjustments.

This trend in health education places the teacher on the "spot". It will require many to take additional work in college and more in-service training. There are many channels open which may also contribute to the teacher's needs. Such things as lectures by physicians and nurses, visits to local hospitals and sanatoriums and the reading of literature will help the teacher to understand the fundamental principles and develop the proper habits, attitudes, skills, and ideals.

"It is necessary to make a thorough study or survey of the practices and habits of every child in all vital health activities such as bathing, sleeping, eating, drinking, playing, reading, exercising, working, and dressing in order to determine his peculiar needs and interests so these may be properly taken care of." Some of the common ways of collecting the most necessary facts are the visitation of the home to observe the environment and interview the parents, asking the child questions and critical observation by the teaching staff.

"The school should promote the development of

desirable health habits.\textsuperscript{45} Regular, thorough methods should be used throughout the school to get children to develop many helpful and necessary health habits. The children must understand the facts before they can meet the new situations which are continuously emerging in this changing world. The school can also help by cooperating with the parents in the development of desirable health habits. The parents may in return cooperate by seeing that children get the correct amount of sleep, selecting and caring for clothes, providing a satisfactory diet, correcting physical defects, insuring personal cleanliness such as frequent baths, using individual towels, drinking cups, wash cloths, and tooth brushes.

"Progress in gaining and understanding of health problems and principles should be checked periodically with comprehensive, standard, achievement tests."\textsuperscript{46} Unfortunately most standard tests seek largely to discover disconnected facts. They may be helpful though to check upon the materials covered and hence to show up weaknesses which otherwise are likely to be overlooked. In the final analysis, the teacher should be interested to know if the pupils are developing health habits and are really gaining an understanding of principles of healthful living.


\textsuperscript{46}Ibid., pp. 28-31.
The following are some of the best known criteria which should be incorporated in a modern health program.

a) Activities should be reasonably vigorous in order to stimulate considerable action of the heart, lungs, sweat glands, vital organs, and systems, and provide an outlet for ever-abundant energy.

b) There should be opportunities to develop permanent interests and skills in some outdoor sport or exercise which is appropriate as a childhood and adult leisure-time activity.

c) There should be many activities so challenging and gripping that they direct attention from self.

d) There should be activities which require the use of fundamental muscles preferably through natural activities such as running, climbing, jumping, throwing, walking, chasing, and falling.

e) Formal, mechanistic, militaristic, and superimposed gymnastics should be generally discarded along with the theory of formal discipline.

f) Outing activities should be considered an integral part of the program of physical activities and should be systematically developed.

g) There should be some activities which involve considerable skill, poise, and control, and are carried on out-of-doors if possible.

h) Activities should be suited to the sex, age, interests, previous experiences, physical capacity, emotions, and social traits of children.

i) There should be appropriate games and corrective exercises for atypical persons who need special adjustments.

j) The natural love of children for gangs, clubs, teams, and organizations should be capitalized.

k) There should be copious, appropriate opportunities for the development of leadership and for wholesome expression for the sense of superiority and excellence in some pupils who cannot otherwise gain social approval.

l) There should be many opportunities for creative self-expression and original rhythms, dances, games, and story plays.

m) Activities should have meaning and significance to the child and provide a carry-over interest.

n) The program of out-of-school work of each pupil should be carefully noted.
c) The general principles of health should always be carefully observed in physical activities in order to develop desirable habits and attitudes and understanding.  

The theory of school health education may be quite far in advance in some school systems, but it is quite evident that the majority of administrators and teachers are making definite progress in terms of more healthful environment. Not only is this true with regard to the actual sanitation of the physical equipment, but also in increased efforts to make the school an attractive happy place where children will want to come and to stay. Problems of lighting, seating, and ventilation are being given more serious consideration and action is being taken to make needed changes. Facilities for safe drinking water and adequate toilet and handwashing facilities are becoming realities in more schools every year.

In certain types of school organizations, in the traditional elementary school and in the rural school, it has been possible to integrate health instruction with other subjects in the curriculum and to combine with it guidance in meeting every-day health problems in living. The situation is in the hands of one individual teacher who can easily draw on other related fields of subject matter in giving health instruction. Recently certain school systems are attempting the experiment of placing the responsibility for health instruction in the department of social science or natural

The continuous shifting of health instruction around from department to department will not accomplish the desirable objectives of this study. "Responsibility for the health instruction course has been passed from physical education to science, to home economics, to social science, and back to physical education." If health education is to be integrated in the curriculum, responsibility for health instruction cannot be passed along but must be shared, with each department making its unique contribution.

A coordinating plan for meeting the curriculum problems of health education has been tried in various schools and cities. Quite often this coordinating agency includes not only a representative faculty health council, but a student health council with a student committee representative of the student body. Usually the leadership for this plan comes from the department of physical education.

In forming a program or course of study, it is possible to obtain information through informal discussions by and with students. Emphasis may be placed on personal control and social conduct. The approach should not be made in the usual elementary method of questions, posters, notebooks, etc., but through a motivation of pupil interest and a parti-

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cipation in personal projects. The problems of health education now becomes the problems of the individual and he is stimulated to do something about it. The "outlets" might come through printed information, through contacts with physical education teachers, the advisor (guidance counselor), or clubs.

One of the essential purposes of health instructions should be personality development. In order to develop a pleasing personality one builds upon a foundation of physical and mental health. Such things as proper diet, exercise, sleep, posture, care of the body, appropriate dress, and accepted standards of conduct should be reviewed.

It is possible for health and physical education to raise the standards of health practices through the proper organization, and administration of individuals and their needs. Progressive administrators and teachers, who realize the fundamental importance of sound physical and mental health, will welcome initiative taken by health and physical education teachers in carrying out more effective programs in health.

It may be gathered from the above discussion that the teacher of health and physical education should offer health instruction. The point of view of the State Department of Education is that the co-qualifications of any teacher of health should be; a knowledge of the subject matter and an understanding of how to teach. Teachers knowing only hygiene subject matter unrelated to principles and a philosophy of education make cruel mistakes in teaching.
"The Ohio courses of study for health instructions are in three volumes.* Volumes I and II contain health units for the six elementary grades. Volume III contains graded units for grades 7, 8, and 9, or the Junior High School, and units for grades 10, 11, and 12. The material for these units was obtained in a two-year research program during which student interests, research studies, popular and textbook literature, health examinations, adult judgment, and vital statistics, were investigated and the vast amount of material subjected to various refining and checking processes until the teaching units as given finally emerged. This research program is reported in bulletin form and may be obtained from the Bureau of Educational Research of Ohio State University."50

The Six-Year Course of Study has been an outgrowth of the above research and the details are listed on pages 133 to 140 of Ohio Health and Physical Series, Volume III. The field of health has been broken up into thirteen categories: Playing, Eating, Keeping Well, Resting, Social Relations, Breathing, Thinking and Feeling, Seeing and Hearing, Appearance, Working, Public Welfare, Heredity, and The Meaning of Health, representing as closely as possible the main functions of living.

The plan is flexible, therefore, the units may be shifted from one grade to another although it is not advisable to shift them more than one grade away from their present setting. It should be pointed out that alterations may be made to fit local situations in any school and the units were planned with that in mind.

50Ohio Health and Physical Education Series, Volume III, p. 132.

*Ibid., (Quotation revised with permission of the author.)
The teaching units have been arranged in four divisions: Discussion Points, Teaching Suggestions, Sources of Information and References, and Integration Opportunities. A suggested technique or method for using the units may be outlined as follows:

"In advance of the class meeting
1. The teacher should read over all the questions in the unit to be studied.

2. The teacher should know the material on the topic as described in the sources so as to be able to answer any of the discussion points.

3. The teacher should select from the teaching suggestions offered and from his own experience those which are practicable in the local situation and should be prepared to introduce them as projects at appropriate times in the lesson. Any laboratory or other equipment needed should be prepared in advance unless such preparation is rightfully a student function.

4. The teacher should select one or two of the Discussion Points for use at the beginning of the class.

During the class meeting the teacher should:

1. Open the lesson by citing the topic for discussion.

2. Invite class discussion by introducing the questions from the unit.

3. Conduct the class by the discussion method using questions asked by the students as well as those in the teaching unit.

4. Wherever opportune introduce the activities or projects from the teaching suggestions and set individuals, committees, or the whole class to work on them.

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51Ohio Health and Physical Education Series, Volume III, pp. 141-142.
5. Keep the discussion on the central theme of the unit.

6. Suggest readings from the sources available as texts or in the school library on the topic at hand and occasionally in advance.

7. Maintain the constant practice of asking questions first -- keeping the answers in non-technical language -- and using the basic anatomy and physiology as explanatory rather than introductory material.

8. Cover as much of the teaching unit as possible in the time allotted.

9. Keep in mind constantly, while using these units, that good teaching will develop in students a technique for self-education. Students will not be "taught and stay taught" forever. The teacher's responsibility is to acquaint them with sources, answer their questions, and constantly encourage them to act for themselves.

If any of the discussion points stimulate questions, these questions will represent student needs. They indicate blocked activities and curiosities on the part of the student. Questions or suggestions by the teacher may help to bring out some of the hidden problems of the students.

There are many points of view concerning the function of education. Some people advocate that it should prepare the student to live in the present while others say it should train for the future. In health education it is necessary to keep both points in mind. The curriculum should be constructed so that the ends of the present as well as the ends of the future will be met. Each student lives now in relation to the future. He learns each new interpretation in relation to experiences that have gone before. "The
greatest opportunity for the teacher of hygiene is to take the student as he is, make him better adjusted to his own world, acquaint him with adult practice and thought, and, in his own language, give him a progressive education with reference to the problems of personal health.\footnote{Ohio Health and Physical Education Series, Volume III, p. 147.}

Individual Physical Education

The aspect of health and physical education program concerned with the physically subnormal students has an abundance of titles, including medical gymnastics, individual gymnastics, orthopedics, individual physical education, restricted physical education, the adaptation of activities to divergent cases, individual health service, correctives, etc. Any one or all of these headings may be used to refer to that phase of health and physical education which deals with the organization and leadership of temporarily or permanently handicapped individuals, in activities specifically adapted to meet the needs so that they may make a happier, more efficient, and complete adjustment to life both in school and thereafter.\footnote{H. G. Metcalf, Individual Physical Education Course 630, Summer School, Ohio State University, 1935.}
as it has been administered in the past, should not supplant the regular program.\textsuperscript{54} This means that teachers, who are responsible for adjudicative work, are realizing that the mere experience of performing a given sequence of exercises to treat a specific defect should not be considered as an adequate substitute for the usual health and physical education course. There are values to be derived from games that are essential to the normal growth and function of boys and girls that must not be sacrificed because of the presence of postural defects. In this connection whenever possible, the afflicted students should take part in the regular classes with special attention given to them in addition to, and not in place of, the required work.

The play element is gradually finding its way into the corrective lessons. This provides a great deal of self satisfaction which should not be overlooked. No handicapped students should be made to feel that they are not able to engage in games with other people. The wide variety of available activities should enable most of them to find some skill that they can learn to perform along with others. Their desire for recognition also will be satisfied through participation in activities rewarding them with a reasonable amount of success. Teachers of correctives are realizing that they are confronted with human beings and not just flat feet and curved spines.

Experience indicates that the correction of a defect is not always a dominant desire on the part of the afflicted one. The motivation of interest should be considered in corrective work. Take for example the career of Glen Cunningham. As a young boy he was severely burned about his body particularly his legs. Doctors at that time even expressed doubt as to whether he would ever be able to walk again. Yet, his interests led him into track and today he is considered one of the greatest runners in history. There are many other outstanding examples that could be mentioned, but in all probability they are familiar to the reader.

Games have a definite contribution to make to the correction of functional defects. For example, if the pattern of movement characteristic of a certain game is one that would aid in the treatment of a certain deviation, persons with such a defect should be taught that game. Skills such as fencing and archery which emphasize erect position of body parts may be suitable for individuals with poor postural habits.

The scope of the restricted program for health and physical education is gradually broadening; in fact, some teachers feel that if for any reason whatsoever students are not progressing satisfactorily in the regular classes, they should attend a special section for personal instruction.  

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56 Ibid., pp. 614-615.
Quite often correctives, to some, mean standing around and watching their classmates play. The thing to do in a situation like this is to segregate such students and permit them to engage in the games with others of similar development or by participating in a graded program of body building activities such as tumbling and exercises on the stall bars, pulleys, parallel bars, and horizontal bars. In case the person possesses bad habits concerning his defect such things as lectures, talks, inspection before a mirror, exercise and games may help overcome them.

Many times socially maladjusted individuals are found in the physical handicapped group. Their difficulties may be provided for through friendly participation in activities affording them a measure of success and failure, and the gradual replacement of fear and inhibitions by self-confidence.

"In order to learn of the prevalence of correctives and what is being done in this section at the present time, questionnaires were sent to 100 school systems in twenty cities with populations of over twenty thousand in Michigan, Wisconsin, Indiana, Illinois, and Ohio. Of the total of 100 questionnaires mailed, we received 76 replies.

The summary of the replies to this questionnaire is as follows:

1. In the majority of situations, attention is confined to treatment of postural defects only.

2. There is more being done in the secondary schools than in the elementary. This is in direct contrast to the many suggestions that for best results correction should begin in the elementary schools.

3. In the secondary schools the majority of replies indicated that correctives was
administered only in the women's department.

4. In many situations where there is a program in the elementary schools and secondary schools, the physician supervises the work.

5. Not nearly so much is being done in correctives in the middle west at the present time as many of us would believe. 57

It is recommended in Volume III, Ohio Health and Physical Education Series, that the schools of Ohio should support health examinations. As a result of such examinations students may be divided into four groups for class arrangement purposes. 58

"A. Those who are without physical defect and therefore able to carry a normal schedule of vigorous competitive activities.

B. Those who have one or more physical defects, none of which are serious enough, however, to curtail a normal program of activities.

C. Those whose physical status is such as to prohibit them carrying a normal schedule of vigorous activities. This group may, however, be assigned to classes or individual work in restricted or moderated recreational activities; or, in cases where the defects found are correctable within the means of the health and physical education department, they may be assigned to individual treatment in physical therapy or corrective exercises.

D. Those whose physical incapacities render them unfit for any program of physical activity, but whose defects may yield to some treatment by the department."

The principles and objectives of a restricted and corrective program in health and physical education for Ohio...


58 p. 99.
as listed below are to be found in Ohio Health and Physical Education Series, Volume III.\footnote{59}

1. It should be clear that two contrasting means of handling group C and D students are available. They may be given recreational activities within the limitations of their defect but bearing no direct relation to its correction; or they may receive individual specific therapy aimed to correct the existing defect. The former method is called the restricted activity program and the latter the corrective program. As a matter of fact, some correction takes place in the restricted program and some recreation in the latter but for general purposes they may be distinguished.

2. The restricted and corrective programs should answer the question of what to do with all students unfit for the normal vigorous program. Here, almost as in no other place, is found a close correlation between education in health and physical education. Health service, health instruction and physical education go hand in hand to make the life of the physically handicapped more enjoyable. There should be something in every program of physical education for every boy and girl to do. The list of activities given later in this chapter may be applied to the cases.

3. Objectives of The Restricted Program.

a. To establish a feeling of competence among those physical handicapped.

b. To give the students opportunity to perfect skill in recreational activities in keeping with the defects and which may be engaged in throughout life.

c. To acquaint the student with nature of his defect and assist him in every way to compensate for it.

d. To secure what correction a restricted recreational program may automatically bring.

\footnote{59 pp. 99-101.}
4. Objectives of The Corrective Program.\textsuperscript{1}

a. To bring an understanding to all students concerning the cause, nature, and prognosis of all defects.

b. To arrest or improve the specific defect of the student.

c. To prevent existing defects from becoming worse.

d. To offer opportunities for prolonged treatment of certain defects wherever necessary.

5. No activity, restricted or corrective, should be prescribed except through the endorsement or recommendation of a physician.

6. Many defects including many postural deficiencies are either not correctable or have been compensated for. In these instances, for the sake of the educational benefits of a recreational program, corrective therapy need not be applied. Only those cases where correction can actually and feasibly be accomplished should be assigned to corrective or therapeutic classes.

7. The health and physical education teacher has definite functions to perform. These are:

a. Administer the program of treatment recommended by the physician.

b. Cooperate with the nurse in all treatments.

c. Keep all records of defects, their progress and development.

d. Serve as a go-between in transmitting the findings of the physician to the parents and to the child; interpret the findings to the school principal and teacher so that adjustments can be made in the school program; and interpret in simple language

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\textsuperscript{1}Some of these are adopted from Metcalf, H. G., "Objectives of Individual Physical Education for College Men! Journal of Health and Physical Education, Volume I, No.9, page 10, November, 1930.
the nature and purpose of all treatments prescribed.

8. Correction, as such, has relatively more importance in the field of orthopedic surgery than in physical education. The opportunity to physically educate so as to allow the student to make a more wholesome adjustment to life is paramount.

9. There is no one corrective exercise good for all cases, now can corrective exercises be given to a large group of students in hopes of preventing some developing defects without knowing exactly what those defects are. There can be no purpose in corrective mass drills given either before or without a health examination.

In the administration of a restricted program, some kind of form should be used to assign students to the program. The form should allow for a wide range of activities to be advised by the physician making the examination. This affords a systematic method for recording and recommending desirable activities which should be used by the individual. Following the recommendations of a physician, the student should have a personal interview with the teacher. At this conference, the teacher and pupil should talk over the cause, nature and prognosis of the defect. The student should be assigned to a class for the restricted or he should be assigned to individual recreation with no class work and at regular or irregular periods.

The work of a handicapped individual should be followed by periodic check-ups (once a month, if possible), with the teacher and physician. These check-ups are necessary in order to note the progress of correction, if any, and to note the effect of the prescribed activity on the defect. At the conclusion of the school term, academic grades should be
given on the basis of the work done or education accomplished. This will help protect the students against any notions of inferiority due to their defects. The individual conference gives opportunity for such mental hygiene training.

Health and physical education has been interested, for some time, in the correction of physical defects. This includes not only orthopedic cases, but also nutritional, cardiac and renal disturbances. Mr. Metcalf\textsuperscript{60} outlines the function of the physical educator as follows: "Correction is the sphere of the orthopedic surgeon and the medical man, and physical educators probably should have little to do with it other than to recognize the abnormality and to see that it is brought to the attention of the expert who can best handle it."

Unlike the restricted activity program corrective physical education needs specially trained teachers. They may be either the regular physical education teacher with adequate and special training in correctives or one corrective teacher may travel between schools doing only corrective work in several different centers.

Sex Education

In January, 1920, the United States Bureau of Education and United States Public Health Service sent out

a questionnaire to obtain information regarding the status of sex-instruction in the high schools of the United States. Its purposes were: to ascertain facts about the number and distribution of high schools giving instruction through the regular subjects of the curriculum; second, to learn of the content and method of the parts of such school subjects as related to sex-instruction and guidance; and third, to discover the attitude of principles toward sex instruction in high schools.

The results showed that some schools give emergency sex education, i.e. through lectures, occasional talks, sex hygiene exhibits, pamphlets. Others give integrated sex education, i.e. incidentally in the subjects of the regular curriculum. Some schools give no sex education.

By scanning the headlines of any daily newspaper, it is easy to realize that sex education is sadly lacking and that the high school students of today are not being prepared for all phases of life. Schools have been glad to shift the responsibility for this phase of education to the homes while the homes respond by saying that they must not talk about such things.

The people of America are beginning to realize that if the aim of education is to develop the whole child then something must be done about his sex life. It is universally understood that sex is important in life but the degree to

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which it governs thoughts and actions is debatable. Physi-
ologists and psychologists have shown that it is a dominate
factor in a person's make-up and behavior, and as such it
deserves the attention of educators.

The following list represents a few reasons for
the need of a sex education program. 62

1. The increasing number of juvenile
delinquency problems.

2. The rapid rise in recent years of
sex crimes.

3. The increase in the number of mental
diseases that can be traced to sex maladjustment
and social diseases.

4. The startling fact that one person in
ten is a victim of syphilis, and that other
social diseases show an even greater percentage.

5. The high divorce rate -- divorce records
show that 95 per cent of all divorces are caused
by either financial or sexual difficulties.

6. The breakdown of the home.

7. The wide variety of cheap illicit
magazines sold.

8. The lack of legislation and law en-
forcement concerning the sale of preventatives
and contraceptives.

9. The increase in amount of leisure time.

10. The increase in the birth rate among
the lower classes and the corresponding decrease
among what we call the intellectual class.

11. The false information and impressions
that youth receives from the so-called "wise guys".

12. The traffic in marijuana and other
narcotics.

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62 Howard G. Leibee, "A Sex Education Program",
Journal of Health and Physical Education, November, 1937,
p. 547.
With these needs serving as a background, it now becomes necessary to establish the aims of a sex education program. These aims are as follows:

1. To give the young people a wholesome and appreciative attitude towards matters relating to sex.

2. To supply a proper vocabulary for the discussion of sex.

3. To answer the natural questions of children and youths in such a way as to prevent morbid and to give healthy attitudes towards sex matters.

4. To prepare girls for the experience of menstruation and boys for the experience of seminal emissions — a preparation made necessary since parental instruction in these matters is woefully lacking.

5. To strengthen the character of boys and girls against the common temptations of youth.

6. To reduce the tension and worry that are commonly associated with excessive or improperly motivated repression.

7. To teach pupils, both by precept and example, to discriminate for themselves between the wholesome and the salacious, as presented by companions, by the stage, motion pictures, reading matter, dancing and other amusements, and to develop a taste and preference for the wholesome.

8. To give young men and women some conception of the responsibilities of parenthood in the light of modern science, and of the conditions under which happy married life may be had.

9. To train the present generation of boys and girls, so that they in turn may be prepared to do their part in giving suitable guidance in sex matters to their children."

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63 An Outline for Sex Education in the High School", as prepared by the New York Association of Biology Teachers, 1922.
The responsibility for a sex education program does not rest with any one educational agency but is a cooperative enterprise of the community, the church, the home and the school.

"Since the school is properly called upon to take over the responsibility of sex education on a partnership basis with the parents, and since most parents are unequal to the task, it would seem that the school has a dual responsibility: first, it must help the parent to do a better job of sex education in the home; and second, it must help the child in ways that his home is at present unable to do. Helping parents to meet their children's needs in regard to sex education is a responsibility which the school of the future should assume, perhaps in cooperation with other agencies. The best plan seems to be continuous sex education throughout the child's sex life."

In order to inaugurate such a program in Ohio schools, it will be necessary to start with those agencies which control the curriculum content. If the Parent and Teachers Associations, Women's Clubs, Service Clubs and other civic organizations cooperate in the development of a sex education program, they must be properly contacted, and the true meaning and nature of the program explained. To do this a community can furnish or secure trained speakers, lecturers, films, exhibits, and health clinics. It can provide women and men doctors to talk to groups of students and parents. Father-and-son and mother-and-daughter banquets and get-togethers are splendid opportunities to improve parent-child relations, and after all, this is the first step

64 Science in General Education, Progressive Education Association, p. 159.
in a sex education program

Mr. H. C. Leibee lists many things that an active and wide awake community can do to promote sex education. He suggests the following:

"The community can provide play areas, recreation centers, and parks where its youth can profitably spend leisure hours; it can keep its streets well lighted; it can promote wholesome, educational, and recreational enterprises; it can sponsor scout and club organizations for boys and girls; it can regulate the sale of preventatives and contraceptives; it can require strict enforcement of the minor law in the sale of tobacco and liquor and in pool halls and other places where youngsters "hang around". It can regulate the sale of cheap and filthy magazines and provide a library open at hours when needed; it can censor movies that smack of indecency; it can operate a vocational program in cooperation with the schools."

Sex education can never be separated from the general curriculum as an individual course until educators know more about it. Teachers, parents and others interested in the subject must be prepared to teach the matter so that it becomes an integral part of the educational program. Another reason for this doubtfulness, concerning sex education as a separate course is that it is too closely interwoven with almost every subject which is taught in the schools. It is well for the present that all sex education be taught in the sciences, social studies, biology, home economics and health and physical education.

To accomplish the teaching of sex under our present

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conditions, it would have to be an integral part of the entire educational program. For example general science can contribute a great deal through the studying of plants and animals. The social and moral phase of sex education can be dealt with in social science, home economics, literature courses and health and physical education. Social science could present the influence of society on the individual and it should help the child to make adjustments to life and society. Here the teacher must be alert and open-minded so that he may integrate sex education with the social science.

The discussion to this point immediately suggests that sex education does not mean merely the instruction concerning sex organs, their uses and abuses, but covers a much broader field. Sex education should include informational, interpretative, inspirational and recreational education.

The question still remains, "Who is going to offer sex education?" Mr. T. W. Galloway believes that it is a community program consisting of:

1. The scientists, physicians, health officers, and nurses, backed by an informed public sentiment.

2. Our reformers, legislators, social workers, courts, lawyers, and publicists.

3. Clean and engrossing recreation and entertainment for all ages.

4. Business society should care for its employees.

5. The whole opinion depends upon the

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66"Sex and Social Health", The American Social Hygiene Association, 1924.
individual opinion of the different members of
the community. It is quite clear that the
heavier part of the task rests upon the few
more common and more permanent social insti-
tutions as the home, the school, the church,
and the organized and unorganized agencies of
play, recreation, and amusement."

The church may be one of the civic organizations or
it may do valuable work as a separate institution. Sunday
school classes under trained teachers, young people's leagues,
and church affairs in which the church shows an interest in
the younger generation, are golden opportunities for the develop-
ment of character traits and sound mental habits. The church
can be inspirational, interpretative, and recreational in its
program.

The school should be bound very closely with the
home in this program. Many educators think that the home is
primarily responsible for the sex education of the child. The
point is that the schools cannot shift all of the responsibil-
ity on the home since the latter, very often, is not capable
to handle the problem intelligently. Where the home leaves
off the school must take up and where the home fails the
school must provide.

The home and community environment of the child has
a definite tie-up with his sex-social relationships. If
they are open-minded and promote fair play, free discussion,
interchange of ideas, honesty and comradeship there will be
a development of traits which will encourage a sane and happy
sex life. This is particularly true during the age of adoles-
cence. This is a critical period in life. Teachers need to
"understand" the children, to be patient, to be sympathetic, and to be considerate more than every. This is the age of juvenile delinquencies, of impressions, of emotional instability, of idealisms, etc. The co-recreational program now going on in Wichita, Kansas, is a splendid example of what can be done. School parties, school dances and school clubs are excellent outlets for the social nature of students and offer splendid opportunities for interpretative and recreational training.

The extent to which schools should teach informational sex education is one to be determined by the attitude and needs of the community. To do this does not necessarily mean that a course entitled "Sex Education" shall be placed in the curriculum at a specific grade level. Boys and girls should be given information when they are ready for it and show that readiness by inquisition.

Physical education classes, intramural activities, and interscholastic athletics are opportunities in which to develop wholesome habits of thought and action and to acquire an inspirational, interpretative, and recreational attitude towards sex education.

Visual Education

Visual education, as it is ordinarily thought of, consists of the use of some device, for representing objectives to the eye. The most common device, and the one which most often comes to mind when we think of visual education, is some kind of photography -- an ordinary photographic print, a stereograph which gives the illustration of depth, a
slide, or a moving picture. 67

These fields of photography represent the possible ones which may be used for health and physical education. Since motion pictures are new to health and physical education, the methods of using them will vary with each individual. The best practice is for each teacher to work with it until he finds the ways which produce the best results. Many teachers have found effective uses for motion pictures in teaching the various phases of health. Coaches are using the "movies" to scout football, basketball and baseball opponents. They also use them to teach the fundamentals of all sports.

The use of visual aids is effective and educationally desirable only when provision is made for pupil activity. Their uses should be a natural outgrowth of the pupils' needs for concrete experiences in the furtherance of some interest which they hold. Teachers should guard against using pictures for entertainment only or for "using up time". Visual instructions may be used to set "health models" or for fixing associations with less effort than other methods. They are useful for intellectual purposes only when they can be presented in such a way as to arouse problems within the minds of students.

The motion picture, sound and silent, portrays the

action and reality of modern life as it is lived today. Experiments show that interest, attention, self-activity, initial learning, and speed of learning are all increased in varying amounts by the use of motion pictures. Unity of subject matter, continuity of thought, retention or permanency of learning are enhanced. Mass instruction is possible and improved.

"Motion pictures offer demonstrable advantages in education. Yet it is estimated that only 10% to 15% of the public schools of the United States make systematic use of them."68 In the field of health and physical education there are several reasons for this: the lack of suitable film; the cost of rent; purchase, or production; the notion that motion pictures are entertaining rather than educational, toys rather than tools, substitutions for rather than supplementary to teacher and textbook.

The following is a list of suggestions for using films: 69

1. Order at least a month ahead of scheduled showing.

2. Name several alternates; substitutes will be sent by the companies.

3. Rental prices are quoted for one day's use only. Additional charge is made for each additional day.

4. Users pay the transportation charges


69Ibid., p. 104.
both ways on free films. All shipments should be insured as the user is liable for any damage to films while in transit.

5. The user is liable for any damage to films while in his possession. Prompt report should be made on the condition of films when shown.

6. Do not rewind films after the last showing, as the owner checks for damage when rewinding film.

7. Write to the State Education Association, State Health Department and State University (Bureau of Visual Instruction, University Extension Division) for a list of their films. These sources have many films for use in their own state at a very reasonable rate in comparison to those of commercial sources."

Visual aids supply accurate concrete experiences which are presented in such a way that they are life like. Children need this perceptual experience in secondary education in order to organize reading, and class room work into a complete unit. It acts as a "tie up" for these two methods of learning. These concrete true concepts give students definite and accurate information. They arouse interests within students. If used intelligently and efficiently they will vitalize and motivate the curriculum.

"Experiments have proven that visual education make more permanent mental impressions than ordinarily would be expected."70 They develop the ability to observe with accuracy and stimulates the pupil to further learning. It is also believed that visual aids speed up the learning process and improves the pupil's ability to organize and express

facts. This means of education can bring to the rich and the poor the study of certain methods and procedures in health and physical education that are in operation throughout the world.

In this connection it is well to know that the American Council on Education has been engaged in: 71

1. Developing criteria for the evaluation of teaching, films in the field of sports.

2. Developing techniques for the use of sports motion pictures in the classroom.

3. Developing outlines or script for specific activities.

The following testimonials exemplify the specific advantages or claims for visual education. They point not only to the value of this kind of instructions, but also to their possible uses.

1. We think in terms of the visual, and so it is quite natural that objects and pictures have an universal appeal.
   Through the visual experiences children come to desire the information that is in books, and so are impelled to learn to read intelligently. Various types of concrete aids build up a rich background which will serve as a basis for comparing, judging, and acquiring new knowledge. 72

2. Visual aids supply the need for more concrete sensory experiences as a background for school instructions. 73

3. The use of slides and films serves two purposes: first, that of economy of time, and, second, that of giving to the children that


72 Anna V. Dorris, Visual Instruction in the Public Schools.

concreteness of concept which comes through visualization. 

4. "Good pictures well arranged and shown will arouse interest and create a greater desire to read." 

5. "Visual aids serve to arouse the learner's interest and motivate the learning process." 

"The recent trend in visual aids has been toward the organization of visual education bureaus. These bureaus serve the purpose of central clearing agencies for the distribution of materials throughout the schools of Ohio and provide the editing and cataloguing services that are vital for the most effective and widespread classroom use." 

The State Department of Education and the Ohio State University supply lists of classified films and materials for the schools of Ohio. By writing directly to them it is possible to secure information and equipment which may be used in the schools throughout the state. 

There is an article in the Research Quarterly which has classified films dealing with almost every phase of health and physical education. They are catalogued under 

74 McCracken and Lamb, Occupational Information in the Elementary School, p. 215. 

75 H. R. Richards, "The Teaching of History Through Visual Education and How It Might Be Used in the City of Columbus", unpublished Master's thesis of Ohio State University. 

76 J. J. Weber, Comparative Effectiveness of Some Visual Aids in Seventh Grade Instructions 


78 Of The American Association for Health and Physical Education, March, 1938, p. 104.
the following topics with their sources given:

1. Anatomy and physiology
2. Communicable diseases
3. Community sanitation
4. Home nursing and child care
5. Nutrition
6. Personal hygiene – Alcohol
7. Personal hygiene – Cleanliness
8. Personal hygiene – Disease
9. Personal hygiene – General health
10. Personal hygiene – Mouth and Teeth
11. Personal hygiene – Sight
12. Personal hygiene – Sunshine
13. Personal hygiene – Posture
14. Personal hygiene – Weight
15. Safety
16. First aid
17. Social hygiene
18. Parent education

Physical Education Films

1. Archery
2. Athletics
3. Baseball
4. Basketball
5. Boating
6. Boxing
7. Camping
8. Dancing
9. Equitation
10. Exercise
11. Fencing
12. Fishing
13. Football
14. Golf
15. Gymnastics
16. Hockey
17. Hunting
18. Jujitsu
19. Lacrosse for Women
20. Olympics
21. Polo
22. Recreation
23. Speedball and Soccer
24. Swimming and water sports
25. Tennis
26. Track and Field
27. Volleyball
28. Winter sports
29. Wrestling

Visual education is still in its infancy and there is yet a great deal to be learned about its uses and techniques. It is safe to assume though that there is a great need for it in health and physical education. It has a wide variety of possibilities which can be realized only with the advancement of visual instruction.
Scheduling

The term scheduling, as used at this time, will deal with those problems of incorporating health and physical education within an all ready over-crowded schedule of academic subjects. There is a large number of schools that are either without physical education programs or with programs that are most inadequate because of lack of time allotment. This may result when one teacher tries to plan for a number of groups with a limited supply of materials. This situation may result in an unnecessary curtailment of physical education teaching time though it does not generally affect the recess time.

Many people feel that physical education is not as necessary for country children as it is for city children. They base their arguments on the fact that country children get enough exercise in the long walks to school and their chores at home. In some instances this is true, but it must be remembered that in the last few years bus transportation and the electrifying of farms have done much to counteract this argument. However even if it was true, there still remains the fact that exercise is only one of the objectives of health and physical education, and that other objectives are equally important.

One of the aims of health and physical education is to give a child the opportunity to develop the ability to play in groups in socially acceptable ways. Physical educators are interested in the development of certain fundamental
skills; in protecting a child in his play from hazards and in teaching him to protect himself. It is, likewise, expected of an individual to keep his posture at its best. A child should learn to follow as well as to lead in play and in work and he should be willing to accept certain standards of conduct and live up to them.

Since health and physical education is considered as something more than a maker of muscles, it can hardly be said that just the exercise of walking after the cows or bending or carrying buckets of milk, takes the place of a balanced program.

The consolidation of schools does not always solve the problem of inadequate programs because they may still be a small school with limited time and facilities. Not only this but many programs are inadequate because the public confuse "varsity athletics" with "educational athletics". If a school can support both programs well enough, but if it cannot, why sacrifice the educational program for the entertainment of the public? Too often the star athlete gets all of the attention while the non-athlete may be the one who needs it most.

The first step in answering such a program would be for the high school to make a careful study of possible available facilities in the community, if it does not have the equipment. Grange halls or church recreation halls may be used to carry out a worth while program.

When a playfield is too far from the schoolhouse to
be used during the day, the transportation buses may be used to carry the classes quickly to and from the field and thus carry out a program for all throughout the school day. In order to insure proper instructions, neighboring towns may share in the services of the director of physical education. If this is impossible or undesirable, a teacher should be secured who can teach another subject besides health and physical education.

The organization of classes may necessitate having two grades together, but girls and boys should be separated except on special occasions (corecreational). "Small schools may exchange visits with neighboring schools to provide competition. If this is under proper guidance it will be safe and instructive. The social side of these visits may well be stressed." 79

A health and physical education program can be put into any small school without additional number of staff if the school will only employ teachers who, in addition to training in the other subjects, have had some preparation in health and physical education. Athletic coaches who have had professional preparation in health and physical education are available. For the girls, the home economics teacher might well be selected from those teachers who have combined home economics and physical education in their major and minor fields of preparation.

With properly trained teachers on the staff there next comes the problem of adding health and physical education to the old curriculum without increasing the teaching load. Alternation of subjects will solve the problem; alternating by years, by semesters, by weeks, or even by days within the week. For physical education the alternation by days would be the best plan. To provide for an after-school intramural program, the school could adopt the seven-period or eight-period day and then use the last period for extra-curricular activities in alternation.

From the above discussion it may be seen that there are several different kinds of health and physical education classes. All students should not be enrolled in the same classes. They may be assigned to classes on the basis of physical fitness, age and grade, or aptitude or degree of motor ability. Free study hours or miscellaneous free periods should never serve as a basis for assigning students to physical education classes. To use the gymnasium or playground as a dumping ground for all unoccupied students is bad practice and defeats any possibility of educational progression within the physical education classes. Health and physical education should be placed on the student's schedule at the same time and in the same way as other subjects. Homogeneous groupings should be the first objective. The practice of turning all unoccupied or unplaced students in the physical education classes is to be condemned. After students are examined and given physical capacity tests, they should be
grouped according to physical fitness and capabilities. Physical education classes should not be used as "catch-all" for school schedule committees.

In scheduling health and physical education in small schools with limited teaching staff, a requirement of two or three periods a week is easier to handle. For example, it would be possible to assign each student some one hour through the week for his physical education, keeping the various grades grouped together. Another plan would be to divide all students of each period into three sections; the "restricted", the "regulars", and the "high physical index", depending on the findings of the physical examinations and motor capacity tests. The teacher could then hold the "regulars" for physical education on Monday, Wednesday, and Friday of the hour assigned and then send them to study hall on Tuesday and Thursday.

The instructor could hold the "high index" students for class work on Tuesday and Thursday at the hour assigned giving them advanced work comparable to their higher abilities and for the third hour permit them to elect an afterschool sport or leadership work with the "regulars" on one of the other three days. The two or three days when they are free on that hour, send them to the study hall.

It would then be possible to change the scheduled hour of the restricted group to conform with the hour when all who are restricted from all other periods can be scheduled.

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in common. For the class work of the "restricted" grade placement is immaterial since the work should be individual, depending in each case upon the type of restriction.

In many schools where there are not sufficient classes in physical education to warrant the employment of a full time teacher, the classes are confined to certain days in the week. For example the boys use the facilities on Monday, Wednesday, and Friday and the girls on Tuesday and Thursday or the boys use the late afternoon periods and the girls the late morning periods.

In high school where the student is of adolescent age and the characteristics of boys and girls are such that differentiation of instruction is necessary, it should be expected to find a segregation of the pupils with a man in charge of the boys and a woman teaching the girls. While it is important to separate the boys and girls, the type of program has considerable influence on the degree to which separation should be required.

There are two plans available for assigning students to classes -- the elective, and the required. Each plan is subject to local modifications.

The elective plan includes the use of a classification or appraisal test such as the Rogers and the Brace. 81

"Classification of Secondary School Boys According to Rogers' Strength Index"

The tests should be given in the order named, with a five minute rest between pushups and pullups. An individual may complete the test within ten to twelve minutes.

Lung capacity (wet spirometer) in cubic inches.
Right hand grip (hand dynamometer) in pounds.
Left hand grip (hand dynamometer) in pounds.
Back lift (back and leg dynamometer) in pounds.
Leg lift (back and leg dynamometer) in pounds.
Pushups Number multiplied by \((1/10)\)
Weight plus Height (in.) minus 60
\((\text{Count one-half for each lift not completed})\)
Add the above scores. The total is the Strength Index.

The Strength Indices enable a teacher to organize teams of relative equal ability. Place the highest S. I. at the top and continue as in choosing up sides.

Classification of Boys and Girls From Ages Eight to Eighteen According to Brace's Motor Ability Tests

Two forms of the test, M and N have been proposed, each form consisting of ten elements. The scales are standardized so that a child's computed score may be compared with established norms and his classification determined at once. This is one of the most widely used tests for equalizing the potential ability of teams for competition."

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1The Strength Index as well as the Physical Fitness Index, and Athletic Index were established by F. R. Rogers and are explained in his book, Tests and Measurement Programs in the Redirection of Physical Education. New York, Teachers College, Bureau of Publications.
The Fundamental Skills Test is another kind of test which is being used for the purpose of classifying students. It is composed of such items as: 1, running, dashes; 2, jumping, broad and high; 3, throwing, accuracy; 4, balance, walk a 3x4 plank; 5, strength, hanging for 40 seconds, sit-up three times, and trunk raising; 6, agility, somersault, jump with turn in place, and spring from kneeling to standing position. In order to pass this fundamental skills test it is necessary to meet the established standard of performance in five of the units.

It should be pointed out that, to date, there is no single classification test which can be recommended for universal use. Many teachers are building their own tests and forming local standards or norms. The purpose of the tests is the same: to provide an objective scheme to measure motor ability in order to segregate students.

After the test has been given to all students, the following steps in class assignment should be taken:

1. Those failing to pass, i.e., demonstrating a need for instruction in the fundamental physical skills, should be assigned to regular class periods. These assignments are a part of the student's academic schedule and are homogeneous as to grade.

2. Those passing the test are allowed to elect a sport or activity for that term from the curriculum offered.

3. The elective group may be handled in supervised classes or as individuals.

4. Attendance in these elective groups

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must be taken on special class cards provided for the purpose.

5. Students should change their elected activity with every change in term.

6. Students desiring to participate in inter-scholastic sports should elect those sports.

7. Students should be given the opportunity to pass the test several times during the year. Lack of space prevents the full description here of the Detroit plan of Appraisal classes with appropriate tests. This Detroit program was devised for girls and should be read to complete the full understanding of this elective scheme of class assignment.  

The required plan for assigning students to classes is the traditional or regular plan, but it is not necessarily the best. It provides for the registration of all students in regular class sections meeting at particular times and following a course of study. Some of its characteristics are:  

1. All students are assigned by grades to physical education classes. Thus, all ninth graders may be in class at 10 a.m. on Tuesday and Thursday or all 12th grade boys at two p.m. every day. Grades should never be mixed if avoidable. To do so, defeats any chance for progression and makes the physical education period merely a play hour.

2. These regular classes follow the yearly course of study, samples given elsewhere.

3. Class assignments should be made at the beginning of the year, at the same time other program assignments are made.

4. Attendance should be checked from the beginning of the term.

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5. Students out for interscholastic sports should not be required to attend other physical education classes. Football and other sports are part of the program. A student should be able to enroll for football as he does for any other subject. Students should be taught that scholastic sports are part of the physical education program and that they may register and receive academic credit for them.

6. Students participating in intramural sports should receive attendance credit in their regular physical education class only on the day on which their intramural game is played.

7. Excuses from physical education should be authorized as in other departments.

8. When the varsity season is over, the student should return to and be enrolled in a regular physical education section.

Some schools in Ohio are faced with the problem of scheduling classes when there is a shortage of space and personnel. The State Department of Education recommends that the teaching load for any one teacher should not be over 30 to 40 in one period. There are many health and physical education teachers, who have as high as 100 to 125 children in a single gymnasium. Effective teaching cannot be done under those circumstances. The North Central Association recommends a pupil-teacher ratio of 25 to 1; the total number of classes taught daily to be 5; and the total pupil-periods per day at 150.\(^{84}\)

It is difficult to give general advice on scheduling because of the local differences in number and length of periods in the school day. Various suggestions have been

\(^{84}\)Ohio Health and Physical Education Series, Volume III, p. 69.
presented throughout this thesis, however. Also in this connection the Ohio Health and Physical Education Series, Volume III has listed three actual samples of schedules, namely, the Galion Schools, Cleveland East High School and the Cleveland Fairmount Junior High School. 85

The class organization is an important factor in the effectiveness of teaching. Loss of time or faulty lesson planning interferes with the best results from a well founded curriculum. Time may be wasted in a usual class through tardiness of pupils, slow methods of taking attendance, poor lesson organization, poorly trained squad leaders, lack of order and quiet during announcements, absence of some plan of class formations to and from the activities. All of these are administrative matters and a well-trained teacher should have the solution to such wasteful practice in his possession so as to adequately control every local situation.

It is interesting to note the following facts about health and physical education in the Ohio High Schools. They show the present status of this field of education in the public schools. 86

1. 80% of schools - have 100 minutes per week
2. 87% of schools - have a teacher with one minor in physical education.
3. 90% of schools - have gymnasium.
4. 58% of schools - have showers and lockers (sufficient)

85 Ohio Health and Physical Education Series, Volume III, pp. 70-72.
5. 53% of schools—have physical examinations for all students once in four years.
6. 76% of schools—require health instruction."

The Intramural Program

"Since educators have come to accept the theory that the athletic interests of the greatest number are best served by a program of sports for all there has arisen a great interest in programs of intramural athletics." The aim of this program of physical education is the same as that for the entire curriculum, namely, education in leisure, organic development, and social adjustment. The intramural program for both boys and girls brings to them the wholesome benefits of vigorous competition and permits the great mass of students to enjoy the good hitherto known only to the varsity athlete.

Interscholastic athletics have long provided for activities that require expert athletes. The inexperts have been neglected. Out of this neglect has arisen the intramural program which provides for everyone. If activity is educationally sound for a few then it should be helpful for all and a sound program should be provided. It is the responsibility of the school administrator to see that both programs (interscholastic, and intramural) receive just development in order that all students may be reached.

The intramural program for girls is of particular

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significance. It offers them competition and vigorous play so frequently denied them because of the centering of all attention on boys' interscholastics. Inter-school competition for girls is being discarded by many modern schools and an intramural program substituted. This procedure is gaining for every school girl an equal chance to participate.

Every child who is to attain optimum physical, intellectual and emotional development must have several hours of enjoyable, vigorous, physical activity every day. It should be out-of-doors whenever possible and in the company of others much of the time.

The regular physical education period does not satisfy this need. It functions mainly in developing skills, knowledges, appreciations and desires connected with physical activities. It does not give opportunity for sufficient practice in the things taught nor for self-directed natural use of them as an integral part of daily living. The school physical education period is essentially teacher directed. It is not just a free play period, but one of both work and play specifically controlled and directed along pre-determined lines.

The intramural sports program partially fulfills the total activity needs of the pupils and motivates further satisfactory types of activity. It provides practice in desirable sports conduct which will affect behavior in such sports away from school. It should be the first and basic extra-curricular activity. "The amount of participation
should be at least one night a week per pupil."

A large variety of activities should be offered throughout the year to reach the seasonal interests of all types of individuals. This would cover for each of the three seasons, three to four activities which should consist of one highly organized team sport for the actively athletic type who likes cooperative activities, one team sport of low organization which is only moderately strenuous to reach the interests of the average person, one individual sport for the boy or girl who is not "team-minded" and one moderate sport for the person who is limited in activity because of physical disability.

Schools that are limited in indoor facilities need to build their intramural programs largely around out-of-door activities such as baseball, soccer, tennis and speedball. Those that are also limited in playing fields can fall back upon hiking, bicycling, riding and skating. If the community affords proper facilities for hire, bowling should be added for it makes a popular addition to the sports offered.

A school program of intramural sports should be so organized and administered that it includes opportunities for all students to participate. It should never be a compulsory program. No child should be deprived of the privilege of that particular personality development which comes from participation in sports wisely conducted.

*1. Intramurals are a part of the broad

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physical education curriculum and as such they should be administered by the teacher of health and physical education.

2. When intramurals are carried on the same day but at different hours from the regular physical education classes, boys and girls playing on intramural teams should be excused from the regular classes and attendance credit be given for the intramural participation. This does not mean academic credit for intramurals. Attendance credit only should be given.

3. Health examinations should be given all intramural participants as they are given varsity athletes. Injury, illness, and danger will accompany an intramural program unless health precautions are taken.

4. The program should be so administered as to require an adequate training period before each sport. No competitor should be allowed to compete his "first night out".

5. Varsity athletes should be denied intramural participation in their particular varsity sport.

6. Intramural teams should be kept as balanced in skill and excellence as possible.

7. Intramural sports need not always be competitive between individuals or teams. Activities such as hiking, fishing, winter sports, tumbling, and water sports may be used to advantage.

8. No intramural program is complete unless 100% of the school population has every opportunity to participate regularly and throughout the year. Teams of experts competing to the exclusion of the mass are no closer to achieving the ends in view than interscholastics.

9. The activities should fit the age and grade of the participants. Intramural football for Junior High School is no more to be recommended than a Shoe Scramble Race for Seniors. The program must be varied to be valuable.

10. The notion that intramurals should be organized so as to provide varsity material is of secondary importance. The principal aim should
be to give every student a chance to participate. If varsity material is developed, so much the better, but that should not be the principal objective.

11. Officials should not be chosen haphazardly. If students are used, special instruction in an officials' class should be given.

12. Round robin tournaments are always preferable to elimination schemes. Elimination tournaments decrease participation by one-half the first round and the proportionately diminishing number of participants is contrary to the aim of the program. An elimination championship is less important than unanimous participation throughout the season.

13. Student managers are necessary in a large program. They should assist the director in handling equipment and keeping scores and records.89

There are various methods of grouping children for participation to include all. They may be organized into clubs with every child assigned to some club. Some children can help with the organization plans and can help in many useful ways in the conduct of the sports by serving as score keepers, managers and in similar capacities.

In the high schools of Columbus, Ohio, they have a unique method of grouping for the boys' intramurals. Any boy who so wishes may become a captain of a team by inviting some other boy to accept the appointment as assistant captain. With his assistance he organizes a team of boys who as yet have joined no team. If successful in his venture the captain enters his team in the intramural program. This is a splendid

89Ohio Health and Physical Education Series, Volume III, pp. 74-75.
way to organize, into playing units, the many students in every school who do not belong to some form of organized unit. With this plan the instructors reserve the right to reorganize teams that seem to be poorly balanced.

The administration of the intramural program of the University High School, Columbus, Ohio, presents another unique way of grouping children for participation to include all. The vertical division for intramural participation is represented by the four colors; orange, blue, green, and maroon. Each grade has representatives from all four houses. It should be pointed out that since this school is small (400 students, grades 1-12) and the individual ability and needs of the children are so well known, that any arbitrary classification scheme within the houses (such as the Roger's Physical Capacity Test or the McCloy Athletic Quotient or the California Achievement Scales) is not satisfactory for some adjustment must be made to take care of the border-line cases.

In a school with a large number of children it would no doubt be worth while and highly desirable to classify children within the houses with one of the above mentioned schemes. Then one could have leagues within each house representing class A, B, C, etc. With this system one would have children of similar athletic skill playing together.

In this school the seventh and eighth grades come together for physical education at the same time and each house has a baseball team composed of members of these grades. After the house captains choose their teams, the children not
on teams are given special instruction in order to bring them up to the level of the team members. If the number left over warrants it another league is organized composed of "reserves". This latter group receives special attention.

A certain period of time, at the beginning of each sport, may be given over to practice and to developing team play and skills with each team. The respective captains and the teacher may take charge of this development. In the individual sports this time can be given over to developing form, technique, and discussion of major rules. Then after each captain has had an opportunity to organize his team, a series of contests may be carried out within each class, everyone taking part. A round robin tournament is most satisfactory for this series of games. It gives everyone in the classes an equal opportunity to take part and experience regular contests. Within the individual sports a challenge tournament is most satisfactory because it gives everyone an equal opportunity to show his ability.

The ninth and tenth grades meet separately and have a league of their own. The eleventh and twelfth grades have leagues of their own in most sports. Each unit has its house captain in every sport and these captains cooperate in events in which the house as a whole participates and all grades are represented (as in boxing or wrestling with the various weights classes).

At the beginning of each season the houses meet and elect their captains for all sports of that current season.
Students officials assist in conducting the games under supervision. Individual and team records are carefully kept.

After each quarter of instruction an inter-house tournament or league series is held. Boxing, wrestling, handball, archery, volleyball, track, baseball, tennis, swimming, touch football, etc. all have their house "champions". There is a distinct advantage in the colors (which are more or less standard) since the children come to the field or gymnasium in distinct uniforms and ready for games. The crossing of class lines has been helpful in this situation because often the instructors find more skillful students anxious to help the unskilled so that they may be greater assets to their house groups.

With good student captains and proper administration the children do a great deal in solving their own problems, especially if the captains come together as an "athletic committee" and discuss their plans and problems with the physical education teachers.

As a result of this organization the physical education teachers are released to give their major attention to the children whose individual needs are most urgent. The others, given the organization and space, will get along pretty well by themselves. The unskilled children need constant encouragement and practice in the development of skills. Gradually with this special attention they are able to join the more skilled groups.

The lack of time is no excuse for neglecting an
intramural program. There must be some answer to an already crowded program. The following suggestions are offered for overcoming this handicap:

1. Add a period a week to the physical education requirement and use it for intramurals or if that is not at all possible give up one of the present periods for intramurals.

2. Organize an intramural sports club with periods during the school hours by getting permission to use one home room period each week.

3. Use the noon hour for sports that are not too active.

4. Use before-school hours.

5. Use after-school hours.

The lack of equipment is no excuse for not having some sort of a program for something can be planned around whatever equipment is available. After the activities to be used by the various groups for the year are selected, seasonal charts for the entire year should be drawn up placing each activity in its selected season by grades. This should be done at the opening of the year before each season opens. The chart for the season should be subdivided into weekly program charts by clubs and activities. Following that, and at least one week before actual play is to begin on any given date, the week's program should be charted into daily schedules and posted so that each club or group will know exactly what activities it is to engage in and where on each
day of the coming week. For each room there needs to be posted only that part of the complete chart covering the assignments of its members, but the physical education teacher should have a complete chart of all assignments of each club, for each play period, for each day, for each week, for each season of the year.

The following program may be used as a suggestion for noon intramurals for the small schools of Ohio.

<table>
<thead>
<tr>
<th>Grades</th>
<th>Monday</th>
<th>Tuesday</th>
<th>Wednesday</th>
<th>Thursday</th>
<th>Friday</th>
</tr>
</thead>
<tbody>
<tr>
<td>7-8</td>
<td>Ping Pong</td>
<td>Sidewalk</td>
<td>Shuffle-</td>
<td>Bull Board</td>
<td>Volleyball</td>
</tr>
<tr>
<td></td>
<td>Horseshoes</td>
<td>Tennis</td>
<td>board</td>
<td>Paddle Ball</td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>Volleyball</td>
<td>Ping Pong</td>
<td>Sidewalk</td>
<td>Shuffle-</td>
<td>Bull Board</td>
</tr>
<tr>
<td></td>
<td>Horseshoes</td>
<td>Tennis</td>
<td>board</td>
<td>Paddle</td>
<td>Ball</td>
</tr>
<tr>
<td>10</td>
<td>Shuffle-</td>
<td>Bull Board</td>
<td>Volleyball</td>
<td>Ping Pong</td>
<td>Sidewalk</td>
</tr>
<tr>
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<td>board</td>
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The director assumes the responsibility of keeping all records. The standing of all teams is reported weekly on printed forms and the bulletin board is kept up to date with daily announcements of game schedules posted one week in advance. In this program each division is a unit by itself and plays off its own championships.
Some schools have found it helpful to include the intramural program in the regular physical education classes. The general aim of the intramural program within regular physical education classes, is to provide actual game participation for the numerous students enrolled who are not taking part in the various interscholastic sports.

Such a plan has many good features and meets the needs in many high schools, but on a little closer observation there arise several difficulties that are rather hard to solve.

1. A great many students do not participate throughout the year.

2. Outside activities and homework often interferes with the regular schedules.

3. Very little direction is possible in developing team play and technique with the individual teams or players.

Mr. L. F. Holden,90 Director of Physical Education, Oberlin Public Schools, Oberlin, Ohio, has found a solution for the above problems by providing a program which is carried on entirely within the physical education classes. It includes the aims usually held for intramural athletics and is carried out under the direct supervision of the director at all times. Also for those who advocate a complete game program for their physical education classes, it provides a very convenient plan.

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of organization. However, in the more varied programs of physical education that include formal work, apparatus tests, and health education, the most satisfactory way to carry out this intramural program is to use the intramural work on alternate days. That is, if three days a week are given over to physical education classes, the first day is devoted to the intramural program, the second day is devoted to the other phases of physical education work, and the third day the intramural work again. Such a plan gives variation in the classes and makes possible a well-rounded physical education program.

For further discussion a brief outline of aims and procedures might clarify the program as follows:

"Aims"

1. Develop the adolescent boy.
2. Develop leadership.
3. Develop team play and initiative.
4. Develop sportsmanship.
5. Interest every student in playing one sport a season.
6. Provide for rivalry and competition between teams.
7. Interest every boy directly in some team.

"Procedures"

1. Outline the different sports for the year.
2. Organization of gymnasium classes.
3. Preliminary training in game fundamentals.
4. Picking class teams;
5. Class teams practice for perfection.
6. Championship games.
7. Awards for winning players."

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The success of any work in education depends largely on the interest and enthusiasm of the teacher himself. The teacher who enters his classes tired, indifferent, and in doubt of the lesson for the day cannot expect much response from the classes no matter what may be the content of the lesson. Such an intramural program as discussed here is quickly understood by the pupils and the interest is spontaneous after the plan is understood. The element of competition and improvement which deepens the interest of every boy is emphasized throughout the program.

After the program is outlined the main objects of the instructor are: first, to develop a higher degree of skill in each sport on the part of the player; second, to encourage backward and awkward boys to take part; and third, to create a personal interest within each boy to be active in some sport each season of the year. With this as the objective of the instructor, a marked development is noticed in the individual boys from year to year. The interest in the different sports will carry over into after school life, and will make for better health and enjoyable recreation in life for every boy enrolled.

There are numerous other units of competition which may be used. For example, competitive groups may be based on natural divisions such as: physical education section, home rooms, study rooms, departments, classes (Senior, Junior, Sophomore, Freshman) or residential districts. Competitive groups may also be based on arbitrary division of students
such as permanent membership for four years for every activity -- all students members of some league, temporary membership for duration of a particular sport season, or only students interested in sports, members of leagues, etc. Leagues, of course, may be named according to any system desired, such as by colors, historic peoples, nations, cities, etc.

Schedule making will depend upon the kind of tournament or series used. For most sports it is more advisable to use the round robin series rather than the elimination. Elimination tournaments reduce the number of participants, a situation not compatible with the aims of the program. In large schools with many team units it may be necessary to form different leagues within the same sport in order to insure maximum participation. The determination of championships is always secondary to maximum participation over the maximum period of time.

Several kinds of tournaments may be listed:

1. The round robin. Every team plays every other team in the league at least once.

2. The elimination. Drawings made and defeated teams drop out after each round.

3. The eliminating-consolation. Defeated teams have chance to play other defeated teams and ultimately return to the championship. No team eliminated until it has played at least twice.

4. The ladder. Team plays other team

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whose name appears immediately above on ranking list. If victorious, names are shifted on the ladder. Object is to climb to the top and remain there. In prolonged tournaments, e.g. handball, ladder should be inverted every two or three months. Put movable names on cardboard or wood.

5. Miscellaneous tournaments such as blind bogey in golf, six day swimming, handicap tournaments, etc., are described in modern books on administration."

Some form of point system is useful, but the emphasis on points or awards should never be so great as to be the principal motive for participation. Points may be given for entrance, team winners, league winners, runner-up, graded points in order of standing, attendance, and other measurable items. Points for sportsmanship and other intangibles are not generally successful because of the lack of objectivity.

It must be remembered that the true values of an intramural program are found in its contributions to education in leisure, organic development, and social adjustments. Unless a program insures these aims it cannot be justified.

Summary

1. The administrator of health and physical education is responsible for the integration of the objectives of the program, the activities of the teacher and pupils, and the materials that are used. (p.39)

2. An administrator must propose and support a definite statement of policies and aims in view of society's conception of democracy. (p.42)
3. The State Department of Education contends that the curriculum in health and physical education should include subject matter that has been selected in such a manner as to achieve the objectives of the school. (p.58)

4. A modern program of health and physical education in Ohio has three main divisions: The School Health Service, Health Instruction, and Physical Education. (p.56)

5. The local board of education shall provide an annual health examination for every pupil in school. (p.73)

6. Some one reputable physician should be in charge and no health examination or nursing program should be instituted without a duly constituted medical authority in supervisory control. (p.72)

7. The principle aim of health instruction is the development of intelligent health conduct. It should provide each individual with information concerning his health, its influence on him, and its influence on the best interests of the community. (p.95)

8. Health instruction should prepare students to live in the present and future time. The program should be a cooperative undertaking between the federal or state and local agencies interested and concerned with health, various members of the personnel of the school, the pupils, and other local educational agencies especially the home.

9. Individual physical education, as it has been administered in the past, should not supplant the regular program of health and physical education. (p.111)
10. The play element is gradually finding its way into the corrective lessons of individual physical education. (p.112)

11. By scanning the headlines of any daily newspaper, it is easy to realize that sex education is sadly lacking and that the high school students of today are not being prepared for all phases of life. (p.120)

12. The extent to which schools should teach informational sex education is one to be determined by the attitude and needs of the community. (p.127)

13. The use of visual aids is effective and educationally desirable only when provision is made for pupil activity. (p.128)

14. Experiments have proved that visual education makes more permanent mental impressions than ordinarily would be expected. (p.130)

15. It is difficult to give general advice on scheduling because of the local differences in number and length of periods in the school day. (p.144)

16. A health and physical education program can be put into any small school without additional number of staff if the school will only employ teachers who, in addition to training in the other subjects, have had some preparation in health and physical education. (p.137)

17. The intramural sports program partially fulfills the total activity needs of the pupils and motivates further satisfactory types of activity. (p.147)
18. The true values of an intramural program are found in its contributions to education in leisure, organic development, and social adjustments. (p.160)
Chapter VI

Teaching Methods*

Stimulating Interests in the Program

There is satisfaction in accomplishments. Children who can satisfy their wants, needs, and interests are interested in the activities that provide this satisfaction. "The wants, needs, and interests of a person provide the initiative and basic motivation for most of the activities in which one participates."1

Teachers should strive to stimulate and develop in their pupils the initiative for educational activity. In order to accomplish this it is essential that boys and girls participate in purposeful activities out of which will arise clearly recognized wants and interests. A person who has many broad and varied experiences will increase the number and variety of his shared interests and wants. He will soon be better qualified to satisfy his wants. Teachers should seek to improve the quality and increase the number of interests and wants of their pupils. Physical education is particularly rich in opportunities for increasing and enriching the recreational and social interests of boys and girls.

In order to stimulate interest in the program, a teacher should make every reasonable effort to broaden the interests and enrich the experiences of his pupils. Some of

1J. R. Sharman, Modern Principles of Physical Education, p. 177.

*For more extensive grouping of the problems of teaching methods see Appendix.
the techniques for doing this include: 1, encouraging the children to read interesting stories of sports and games; 2, using stories, anecdotes, and pictures by the teacher in an effort to develop a broader appreciation and understanding of the spirit and traditions of games; 3, providing in the daily programs some simple and easy activities that all the pupils are able to do well; 4, outlining certain practice exercises for the retarded pupils that will help them to improve their fundamental skills; and 5, giving as much individual help and instruction to these pupils as the teacher can possibly give without neglecting the instruction of the other members of the class.

A person thinks and learns in terms of the meanings which he has accumulated through experience. A person who says "that does not make sense to me" means that he has never had any experience that is related to the new idea or experience. A knowledge of football serves as a background for the teaching of touch football, baseball for playground baseball, tennis for ping pong, etc. In such cases the new games begin to take on meanings as the result of previous experiences of the boys in the regular games.

First-hand experiences are usually more vital and innately meaningful than second-hand experiences. If, for instance, a teacher introduced speedball to a class by telling them it is played with a round inflated ball and combined some of the characteristics of basketball, football, and soccer the new game might take on some meaning for them if
they were familiar with the other games.

In teaching practically all physical education activities the pupils should be permitted to begin participation as quickly as possible with the minimum amount of time spent in explanation. After gaining first-hand experience in this way they should be introduced to the finer and more technical aspects of the games. They will then be more ready for practicing some of the highly developed fundamentals and techniques which have been perfected over long periods of time by generations of expert players in the same and related sports.

"Interested and willing persons learn much more quickly and retain the learnings longer than individuals who are bored or who act in response to coercion." Activities which thoroughly call forth the powers of an individual are interesting to him. A person is interested in an activity when the material or subject matter to be learned forces him to draw from his innate tendencies, his habits, and his previous experiences. Interest which is real and sound furnishes the most desirable and highest type of motive for learning. The motive is in a physical activity itself, and therefore, it is not necessary to stimulate or create a motive for activity. Games do not have to be made interesting; they are in most instances activities which are naturally and inherently interesting to boys and girls.

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In many cases the main problem in physical education is not so much to arouse interest as it is to keep from killing the interest children already have. Frequently, as the result of poor leadership, the use of unwise methods, or the choice of unsuitable subject matter, pupils are caused to dislike activities in which they normally would be interested. Students often dislike physical education and try to "get out of gym" because there is something wrong with the curriculum or the teacher. As a result the teacher concludes that pupils who do not like to take part in the physical education program are stubborn, obstinate, contrary, or relatively unintelligent. Before the blame is placed on the pupils a teacher should make a critical evaluation of himself, the methods he uses, and the content of the program.

The period over which an individual can keep a sustained purpose is usually spoken of as his "interest span". The length of the span is determined to a considerable extent by the breadth of meaning one is able to get from the activities in which he is taking part. If they are meaningful and purposeful to him he is likely to be interested for a relatively long period. The "interest span" of young children is usually quite short and becomes progressively longer as they become older. In teaching physical education, teachers should present new ideas, problems, and skills that are within the interest span of the pupils, but they should also be striving continuously to stimulate and develop new, broader, and more sustained interests.
If a student knows the objectives that he is working for it will contribute to efficient learning. In other words, he should have a purpose, self-inflected, for the activities in which he takes part. These definite and specific goals should be clearly understood by all pupils involved. They should be established for each activity included in the physical education program.

It is also important that the instruction be organized and planned in a way that will enable each pupil to know frequently what progress he is making toward the achievements of the goals. In swimming, distance and variety of styles provides this element. In baseball, the improvement in the number of hits serves as a check. In archery, a student can count the bull's eyes scores. In golf, the medal scores can be used. In all other forms of activity the pupils should know clearly the specific goals for which they are striving.

Putting into actual use the skills which have been learned in physical education classes is one of the most effective means of associating satisfaction with the learning of motor skills. Intramural leagues, after school or during the long noon period in some schools, provide occasions for the demonstration by pupils of the things they have learned. Many other opportunities for boys and girls to use the activities learned in physical education may be found in field days, play days, athletic carnivals, tournaments, meets, picnics, parties, and play festivals.

>All learning takes place as the result of the
activity of the learner. Self-directed activity on the part of the children is much more valuable than activity directed and dominated by the teacher. 3 Psychologists maintain that practically no learning takes place by absorption. Learning takes place more effectively when the learner is interested and actively trying to learn. Teachers should realize these facts and attempt to encourage their pupils at all times to try actively and enthusiastically to learn the activities being taught. Efficient learning depends on interested pupils participating in correct practice which results in satisfaction to them.

Testing and measuring in physical education is another way of arousing sufficient interest to start the pupil talking. The child is usually concerned with something that he can see or feel, such as, a gain in weight and height or a higher coefficient. He can measure his progress from time to time and he is interested in seeing self-improvement.

The National Physical Achievement Standards and the Neilson and Cozen tests are good examples of motivation tests. Experience shows that they have proved valuable wherever used to awaken in pupils a desire to improve their physical efficiency and motor skills once they see where they stand in reference to scales of achievement. They offer an objective method of showing pupils wherein lie their strengths and weaknesses and of measuring their progress towards a desired

end.

It is a well established fact that every person is different from every other individual in a large number of different traits and characteristics. The results of a medical examination may show that some individuals are deficient in organic development or have some abnormality in organic functioning. Achievement tests in different physical activities will reveal a wide distribution of accomplishment in an unselected group. In a like manner, the interests of pupils in the various activities of health and physical education are certain to differ widely.

One of the reasons of having a teacher in health and physical education is to help pupils learn more quickly and efficiently. This teacher should point out faults and errors to pupils and help them to overcome weaknesses and to remove their deficiencies. "A teacher can help pupils to discover their faults quickly and can suggest methods of practice which will result in the maximum degree of skill with the expenditure of the least amount of time and effort." 4

Physical education, more so than health, requires considerable correct drill on skills in order to make the execution of these skills faster, more accurate and automatic. Take for example the basketball player. If one has to stop and think how to perform a skill the speed and expertness of execution will be greatly decreased. When a boy bats a ball,

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his step and swing all form one smoothly coordinated skill.

Drill should be carried on for the purpose of perfecting skills after pupils have had experience with them. Drill then becomes purposeful. This is necessary if the pupil is to realize the necessity of drill in order to have maximum educational value. Take for example a class in junior high school basketball which has had no previous experience with the game. If the members were placed in lines and required to practice the pivot, the activity would have very little meaning to them, and it would be only a short time before the boys would be bored with the exercise. On the other hand if the teacher explains the game to the pupils and they are permitted to play for a short time, they see the need of being able to pivot well and to develop other fundamental skills. Drills then become drills with a purpose and a more intelligent approach with much better results realized.

Children should have experience in assuming responsibility. Leadership may well be one of our objectives. We can provide for this by letting them serve as captains, squad leaders, scorers and officials. Emphasis should be placed on activities that are directed by the pupils. These activities will help build up confidence in the individual and he will derive satisfaction from this trait.

The Coeducational Program in Physical Education

In organizing and administering any program of health and physical education it should be kept in mind that
the student is the important unit rather than the teacher, and that all devices and procedures should place emphasis on the development of initiative and leadership capacity on the part of every child. This points to the increasing need for techniques that will make it possible to provide coeducational classes in sports and other carry-over recreational activities. Since boys and girls and men and women must live together, it is highly essential that they learn to play together. An effective program of coeducational training, however, demands highly modified procedures.

Much unhappiness and emotional disturbances for adults is due to the fact that they do not know what is socially the correct thing to do in a given situation, when humans work or play together. The habit of consideration for others can not be started too early. Health and physical education affords many opportunities to practice courtesy, respect and social living for both sexes providing they are permitted to work together.

It would be worth while throughout the school life of children, for teachers to select and organize an activity program in which boys and girls play together frequently. There are a few problems though that prevent this plan. In the first place the problem of competitive athletics for boys require serious study. This should be from the educational point of view and not the "winning-of-games". The "winning-of-games" absorbs most of the time which should be used to organize boy and girl groups for instruction, with training
in leisure-time pursuits.

Boys and girls play together naturally in life situations; not only play together, but work together at skills, helping each other in the learning process. In their play, however, they recognize certain activities as purely "boy activities", and others as purely "girl activities". The sexes do not ordinarily mingle in these activities. Physical education has long recognized this differentiation in its school program. But contrary to the real life situation, it has gone so far as to separate the sexes in all physical activities beyond the fifth and sixth grades.

"Mixed recreation in the school program in the forms of physical activity, other than social dancing, is a development of the early 1930's and the swing towards mixed class work in certain activities is still more recent."

All sports which do not call for personal contact and which are normally enjoyed by both sexes offer a great variety of games for experimentation for coeducational class work. The activities need not be confined to sports for in life situations the sexes intermingle in many other activities such as folk, tap, and social dancing.

There are many educational advantages of coeducational activities. Through coeducational classes in physical education boys and girls should become accustomed to playing together correctly and without self-consciousness in the

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presence of the opposite sex. With careful guidance the boys should come to know the courtesies due their girl opponents and their girl teammates. They should learn how to assist girls in game situation, keeping hand off according to the code of a gentleman. Boys need to learn to tame their strength and to adapt it to the girl's lesser capacities for the sake of their mutual pleasure in playing together. Girls need to play with boys in order to gain from them a better and quicker understanding of sportsmanship than they get from playing only with each other. They can learn much from boys of the "give and take" spirit that is wholesome. Such lessons learned in play in school days should carry over to a later happily shared recreational life. The capacity to play happily together should mean success in personal relationships.

Both boys and girls should probably wear school cloths with a change of shoes. This would prevent the "undress" type of problems. Other types of sport cloths may be worn by each group, but great care should be exerted to prevent the breaking of any community mores.

There should be fine cooperation on the part of both the man and woman physical education teachers in the division of the work, in the scheduling of the classes, in the assignment of pupils, and in the management of the after-school tournaments which would naturally follow such class work.

The actual class period should be one of instruction with the teacher serving as an instructor and not merely as a sports referee. The lessons of these periods should be
planned with definite progression, hour by hour, and with achievement tests and standards set up for passing the course, as is planned for all other instructional class work of the school.

"A growing number of schools, high and elementary, are scheduling facilities, faculties, and physical education periods, so that boys and girls together now have frequently repeated experiences in studying leisure-time activities, and the social customs that are part of them."  

During 1930-1931 the Abraham Lincoln High School of Los Angeles "undertook an experiment of their combined physical education departments in which the normal social situation of boy and girl together would be maintained and the content would be avocational in nature."  

Archery, golf, tennis, and social dancing were offered. Boys and girls were permitted to elect and study, during two of the five weekly periods in physical education, one of the above activities, each of which has an appeal for use in adult living.

The most popular classes were those in social dancing open to all students, but required of none. Early outcomes were: improved personal appearance for the students and social ease, both boys and girls overcoming their extreme bashfulness.

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7"Carry Over Sports Program", Staff of the Physical Education Departments, Abraham Lincoln High School, Los Angeles, California.
There are various other ways of solving social problems within the physical education department. For example, some schools conducted a social dancing class on Friday afternoon for an hour. As a result the school parties which followed were very successful. The parties replaced former activities which had been confined to road houses and dance halls.

Other schools have made Friday an elective day. Three choices may be possible: archery, social dancing, and games. The activities are equally divided with boys and girls playing with and competing against each other. Elmer D. Mitchell makes the following observation:§

"The demand for co-recreational activities among high school groups doubles in tennis and badminton, mixed golf foursomes, archery field days, volleyball, bowling, squash racquets, ping pong, deck tennis, shuffleboard, and the popular outing events of hiking, riding, skiing and skating."

Boys and girls who are temporarily or permanently handicapped very especially need the thrill of acquiring and perfecting skill in games suited to their particular limitations. The experience of team membership, with all the responsibility and discipline in good sportsmanship that such membership should provide, as well as the joy of a contest finely played, should be among their experiences. They need the satisfaction that results from playing various types of activities suitable for leisure-time hours, at or away from

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school.

It rightly follows then that no one should be excused from physical education. If students need rest, it should be provided, but as soon as possible the pupils should be assigned to study less active games. In any event, handicapped children should learn the rules of the games being played by the usual classes. Quite often they can serve as umpires, referees, time keepers, score keepers, etc. This will serve to build up their ego and feeling of success.

"The objectives of the program for any student or group of students, temporarily or permanently handicapped, are: (1) to build up the morale of the individuals who because of a handicap are apt to feel that they are "down andouters" -- different from other folk; (2) to return those on a limited program to the regular program of activities as soon as the handicap may be improved or removed; (3) to give all such students a chance to acquire skill in games, as the pleasure experienced may result in the continuation of play activities after normal school days are ended; (4) to help students develop attitudes toward their own health problems that will enable them so to organize and engineer their daily living as to conserve their strength and develop emotional stability; (5) to develop recreational habits that will be constructive, wholesome, and satisfying.

It is entirely possible to arrange boy-and-girl groups for these students so that they may study and enjoy different activities together. A partial list of the activities they might do together are: (1) games that may be played on a table, or in which small objects are thrown toward a game board or diagram, while the students are seated such as Airway games, Babe Ruth baseball game, bean bag bowling, built in the china shop, canball, conette, crokey (table), do-do ball, hang-it game, indoor tetherball, jolly tumblers, kanuk, poosh-m-up, ring-o-lett, ring the chair leg, smiling faces, spin the ring, table baseball, whirl; (2) games with darts such as bolonette, darts, dart baseball, dart-mor game, hearts and darts, poppin ball, riflery, smithy target
game; (3) games played with equipment or with a diagram drawn on the floor such as bean bag bowling, bean bag toss, bocce-indoors, bola-ball, bridgeball, bull board, croquet, ding dong bell, duck pin bowling, floor baseball, lucky strike bowling game, golf putting indoors using Wilson's putting discs; (4) more vigorous games that this group may enjoy together are archery, battledore, and shuttlecock, bonanro, bowling on the green, clock golf, codeball on the green, deck shuffleboard, deck tennis, diabolo, disco, fly casting, lawn bowls, paddle tennis, pig-in-the-hole, ping pong, quoits, rhythms of various kinds -- folk, social, and square and longway dances; sail-o-rett, six-hole basketball, tetherball, volleyball doubles.

For the boys and girls who may enjoy vigorous play, the following are suggestive of the activities that they may enjoy together: archery, badminton, basket end ball, batball, le boccie (outdoors), bombardment, boundball, bowling, captainball, captain basketball, codeball on the green, crossball, curling, dancing -- social, tap, quadrilles, double cornerball, driving in golf, duck on the rock, duello, endball, field dodgeball, four-court dodgeball, handball, hand tennis, hit-pin base-ball, kickball, longball, netball, nine-court basketball, paddle handball, paddle tennis, ping pong, progressive dodgeball, relays, rollerskating sail-o-rett, simple mass games, hunting, snow games, soccer baseball, stunts, swimming, tennis, tetherball, triangleball, two old cats, volleyball, volleyball doubles, work-up.⁹

It is evident that the games mentioned in the above lists are useful for the vigorous group, but not of necessity during their physical education period. Many of the games should be useful during the noon hour and for intramural play when too strenuous activities are not desirable. These games

may also be useful for recreational periods, such as fun nights, progressive (rotative) parties, play nights, play days, etc.

The games listed by Winifred Van Hagen will require some equipment, but the expense will be very reasonable. Even if it did cost a great deal, the program is as justified as football, basketball, chemistry, Latin, etc. If one of the objectives of the school is coeducation it is quite legitimate to ask the school to support the program financially.

One of the chief responsibilities of educators is to present situations for students to try their skill in working out problems. Some students will fail while others will succeed. It should be the duty of a teacher to expect some failures and then do something about it. The program may be too far above or out of reach of the student's possibility. In other words the activities must be graded to meet the needs of the individuals. In any program of corecreation the teacher must see that students shall have the satisfaction that accompanies success.

The problem facing coeducation in recreation is how can life situations be created in which boys and girls study and work together. It appears that the origination of such a program should grow out of a committee composed of faculty and student representatives. This committee would be in a position to support social projects, involving boy and girl participation that are managed by students. Each school will have a different program because of the difference in needs and the
difference in environment. The only similarity should be the principle of student participation and leadership, with the faculty members in the background in an advisory capacity.

In summing up the contributions of this new trend of coeducation in recreation, they may be listed as follows:10

1. Contributing new and wholesome opportunities for congenial companionship.
   2. Resultant ease of adjustment in mixed groups.
   3. Increased self-expression from participation in athletic, social and creative activities.
   4. More self-confidence and assurance from the better skill and performance that such participation will engender."

The new movement's future success depends upon factors other than the merit of the idea itself. The interest of the group participating in the program will depend on the leadership, administration, and organization that are offered. Interest will also hinge on the ability of a teacher to provide facilities for mixed group recreation and the social recognition that this form of "mixer" activity receives. The personality of the person in charge will contribute much to the success of the program.

Mary J. Breen writes that, "Adolescence is unquestionably the time for adjustment to the opposite sex."11 If the school is willing to assume this responsibility, such things as courtesy, consideration for others, and self-control


11 Mary J. Breen, Partners in Play, p. 3.
should dominate the groups. During the lessons, as an essential to final success, there should be a real spirit of fun and enthusiasm evidenced, by the physical education instructors, by the principal, the faculty members, and the students.

Classifying and Evaluating Students

Classifying and evaluating students may be understood to mean the grouping of students for instruction and for judging their position in relation to their development. Tests of physical education activities may be placed under two headings: classification tests and achievement tests.

This grouping is based upon the function of the test in the organization and administration of the program. "Classification tests seek to determine the capacity of the individual in the light of some standard: achievement tests, on the other hand, aim to measure what the individual can do, what he knows, the knowledge and skills he actually possesses at the time the test is given."¹²

Health tests may be used for classification purposes, whereas tests of basketball ability are achievement tests. Classification on the basis of purpose does not exclude the use of the same test either for purpose of classifying individuals or for measuring their achievement.

An achievement test in physical education measures

learning and is concerned with the progress of the individual in physical activities. It is concerned with learning that has taken place and not with native ability. For this reason an achievement test is usually given at the beginning and end of a learning period to measure progress. A classification test, however, which is used to place individuals in a program is administered at the beginning of the season, term, or semester. Norms in different activities may be established and may be used for purposes of classification. They indicate where an individual is at any particular time.

Before a teacher in the public schools of Ohio can devise or use tests, he must use a criteria for selecting them. *For example, what is the validity of the test? Does it measure what it is supposed to measure?*

The *reliability* or accuracy of a test may serve as a second criteria. If it is reliable, different people giving the test to the same individual at different times should obtain approximately the same scores. If a person can score high at one time in the test and very low at another time under similar conditions, then the test is not reliable.

A good test should have *objectivity*. If it shows this element, the results of the test are free from subjective judgment by either pupil or teacher. Most tests will be objective in physical education since they involve definite units in time or distance. Objectivity in scoring will, of course, affect reliability in any test, but there are not very many chances of recording wrong scores in physical educa-
tion. The thing to remember is to be careful in reading the stop watch or tape, etc.

The informational sheet indicated that many teachers of health and physical education are overloaded with work. If this is true, tests should provide for administrative economy. This includes the time requirement for giving tests and their costs. The time required to give a test may play a very important part in the matter of cost. "If testing is to be of value, the results must be secured and interpreted almost immediately, and with large groups teachers cannot be expected to assume the entire burden."\(^{13}\) If special apparatus is to be used, the construction of this will be another added feature to the cost.

If a testing program is to progress then norms must be established by adequate sampling over the entire country. A group of numbers taken at random does not produce good norms. "Adequate sampling plus a sufficient number of cases to reduce the standard error of estimate to a negligible quantity are the keynotes of good norms."\(^{14}\)

Great care should be exercised to prevent duplication of forms in administering tests in health and physical education. This will waste time, energy and patience and no desirable results can be obtained.

If tests are to accomplish their objectives definite

\(^{13}\text{Bovard and Gozens, \textit{Tests and Measurements}, p. 236}\)

\(^{14}\text{Ibid.}\)
plans or directions must be followed. They should be worked out in advance as well as the exact method of administering particular phases. These directions should be printed and not left to the imagination.

Medical and physical examinations should be supplemented by physical capacity, motor ability, and physical achievement tests if students are to be assigned class work intelligently. Here it must be taken into consideration their motor needs and capacities as well as their organic capacity and physical condition. The national survey of secondary education shows that twenty-five per cent of the schools studied use physical performance tests and that "the testing program (if any) . . . . is still largely in the stage of local experimentation." ¹⁵ Many schools are using ability grouping in all junior and senior high schools. In Lima, Ohio, the children in the elementary grades work on fundamental skills for at least twenty minutes during each week.

The principal values of a testing program are as follows: ¹⁶

¹. It gives a basis for homogeneous grouping which makes a better program.

2. It holds the student's interest in the physical education work; discipline becomes a minor problem.


3. It gives a basis for equalization in competition which in turn produces better competition.

4. It motivates students to do hard work.

5. It gives the instructor information as to student's abilities, at the beginning of a course, during, and at the close of the course.

6. It enables the teacher to know what he should expect of each student.

7. It is an aid in teaching.

8. It is a valuable assistance in planning corrective procedures.

9. It gives the basis for building the program around the individual needs of pupils.

10. It gives information on which personal help to students may be based.

11. It gives a good basis for comparing program results year by year.

12. It sorts out the best students to train as leaders.

13. It offers immediate interest to those who are being introduced to their first work in physical education.


15. It arouses an interest in students in their physical fitness.

16. It motivates students to work at physical improvement outside of their physical education class periods.

17. It offers opportunity for superior students to improve their rating.

18. It interests the parents when they see that there is an actual aim in the work towards improvement in ability and fitness.

19. It arouses an interest in the work on the part of the school administrators.

20. It gives the teacher increased integrity in his work.
It is natural for people with similar ideas and capacities to group together. School children are no exceptions, the only difference being that the grouping is no longer natural but instead, pupils are grouped by teachers and administrators for instruction in order to reduce the cost of education or to increase its effectiveness, or both.

Pupils should be classified and grouped in terms of educational objectives. If one of the functions of the health and physical education program is to teach tennis, then pupils should be examined and separated into small classes in accordance to their interests and abilities. A school has many functions, but since the aims of education are health, social efficiency and culture, it is proper to adjust classification programs to these aims before any others are attempted. The aims of education and of the school provide the primary criteria for the classification of pupils.

"In dealing with students, their individual differences should be considered first." Classification then becomes secondary in importance. Even if the ultimate aims of students are similar, there will be many and great individual differences. Such variations as sex, health, intelligence, age and educational status and interests are important because they require separate answers.

It has been pointed out in Chapter V, page 115 that students may be divided into four groups for class arrange-

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ment purposes. This is the result of efficient medical and physical examinations. These groupings consisted of the privileged, intermediate, and corrective groups.

In most schools it is also necessary to plan for internal groupings. This means that in both junior and senior high schools there is a need for pupils to be divided into squads of equal general athletic ability. This provides for better competitive activities. The Strength Index Test is an effective method of forming squads of equal ability. It is possible to match the scores of individuals.

For example one technique for selecting squads is for the physical educator to obtain the Strength Indices of the group of boys whom he desires to divide into teams of equal ability. He should then arrange the names on cards in the order of their Strength Indices. It would then be possible to deal off, say, four cards to the right, forming four piles and continue until all cards are dealt. This will provide four teams of equal ability.

"The object of classification, in the past, has been to secure a homogeneous group that can work together to good advantage on the same piece of work." Having such a group, the teacher could teach many pupils simultaneously, and time and effort were not wasted in individual instruction. In order to secure such a grouping, grades had to be formed and some hazy generalizations were developed for determining

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when a pupil should pass from one activity to another. Facts and formal skills were the basis for promotion.

These ideas have been carried over somewhat into modern physical education. Some of these characteristics are still valuable, but the trend has changed and the emphasis is on "development" and not "information". This development or advancement should be measured in terms of the objectives of the program.

The classification of students is usually the result of observations, opinions, tests, or any combination of the three. A test is useful in education only if it helps the educator to serve his pupils better. The specific usefulness and limitations of each test should be known and it should be used only for the purposes for which it is adapted.

Since adequate tests have not been used in the past to help classify students adequately, most of the programs are ungraded.

"There is far too much duplication of teaching material from year to year; classes are badly sectioned or not sectioned at all; there are no widely used standards of achievement, and the existing standards are not correlated with the individual differences in the innate capacities of the pupils; there is a poor motivation of the program; almost no diagnosis of the causes of individual deficiencies; the grading and promotion systems are subjective and inadequate; and most of the progress is by trial and error."19

One reason for the above existing conditions is

that most physical education is taught as mass activity, and not as an individual application of method.

Tests and measurements may be used for the determination of childrens' innate capacities. Once these are known they may be used to serve as a background for classification. The results of some tests may be used either for diagnosis of the causes of performance disabilities, or for the prognosis or prediction of latent abilities. It is frequently useful to combine several tests designed for the measurement of specific abilities into one general battery for the measurement of general innate motor capacity. The records of the separate elements in the battery may always be interpreted separately. "This use of motor tests corresponds to the use of the best intelligence tests in mental education, both for the purpose of determining the general development of motor function, and for the determination of relative innate strengths and weaknesses."20 Before a teacher can classify the pupils to the best advantages, he should know the innate capacity of the pupil.

The usual procedure in organizing classes in physical education is not on the basis of ability and skills. To put it another way, physical education classes are organized on the basis of class or grade in the elementary school and on the basis of class period available or open in the

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high school. Students should never be assigned to physical education classes on the basis of free study hours or miscellaneous free periods. To use the gymnasium or playground as a dumping ground for all unoccupied students is bad practice and defeats any possibility of educational progression within the physical education classes.

Health and physical education should be placed on the student’s schedule at the same time and in the same way as other subjects. The programming of physical education is too often a matter of fitting in periods of activities around a schedule made out largely with reference to the needs of academic departments. This is unfortunate since homogeneous groups are necessary for effective teaching. Quite often boys of junior high age may be found playing with senior high boys. It is evident that they are not of the same physical ability or skill. The practice of turning all unoccupied or unplaced students into the physical education classes is to be condemned.

It has been pointed out that there is a need for tests that measure the present ability of pupils. It is important for physical educators to know to what extent of his capacity a pupil has developed. The Physical Fitness Index of Rogers21 and McCloy’s Athletic Quotient22 are

21F. R. Rogers, Fundamental Administrative Measures in Physical Education.

tests which may be used for this purpose. Their weakness may be found in that they do not quite measure the innate capacity of the individual. These tests are more appropriately used for motivation and for measurements of absolute ability.

"Tests for general capacity and ability are probably the best methods to use for classification, and when the two are properly equated, they are the most objective basis the profession now has for grading and promotion."\(^{23}\) Mr. McCloy points out that for this purpose they are not entirely adequate because the measurements of certain technical skills are as yet not sufficiently objective. The combination of these two types of tests will indicate how good a pupil is for his potentialities and permits the instructor to serve him and guide his development more effectively as an individual.

A careful canvas of current literature on tests and measurements indicate that the testing program can and should be organized so that certain of the tests will be given only every three years. Others may be given once or twice a year, and some of them seasonally according to the sport to which the test is related.

Mr. McCloy\(^{24}\) suggests that it is perhaps best to give the three year tests at the beginning of the fourth grade, seventh grade, and tenth grade. Or it may be desirable

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\(^{24}\)Ibid.
to administer them at the end of the grades just preceding these in order that the records may accompany the pupil and guide the instructor of the next school unit and assist him in placing the pupil without delay in the group to which he is best adapted.

The following tests may be used every three years:

A. The Sargent Jump Test is primarily a test of the individual’s available horse power as related to his size or weight.

It is particularly useful in the prediction of athletic ability and potential velocity of movement. Sargent points out the fact that we usually think of height and weight in connection with the power or strength of an individual, but goes on to say that these measurements really do not give us a correct idea of “innervation of the parts, upon which power and efficiency so frequently depend.”

The test which Mr. Sargent proposes, consists of using the constant factors of height and weight together with an individual’s ability to overcome the constant force of gravity.

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\text{Efficiency index} = \frac{(\text{Weight in pounds}) \times (\text{Height jumped in inches})}{\text{Stature height in inches}}
\]

The jump should be made straight into the air with the head touching a cardboard disk placed at the highest point above the head that can be just touched in

jumping. It was discovered by later experimentation\textsuperscript{26} that the jump was independent of both height and weight and hence that these factors could be discarded.

B. Some test of motor educability should be given once every three years. There are three good tests available for this purpose namely: The Brace Test,\textsuperscript{27} the Iowa revision of the Brace Test,\textsuperscript{28} and the Johnson Test.\textsuperscript{29} Either one of these tests may be used in a school which employs stunts in its general program. Any of these tests measures rather accurately the ease with which an individual learns new skills. They consist of several events in the nature of stunts which are easy to administrate and simple to score.

C. The Burpee Test\textsuperscript{30} is a test of large-muscle coordination and supplements the tests of motor educability. A combination of these three tests (A, B, C) will measure the General Motor Capacity\textsuperscript{31} of a student and


\textsuperscript{31}Ibid.
can be interpreted in the form of a Motor Quotient. The latter in the motor field may be compared to the Intelligent Quotient in the Mental Field.

There are other tests which should be given once a year or oftener. Mr. McCloy suggests the following list as one which is desirable, but not exclusive. The judgment of the physical education teacher in charge and existing conditions may alter the situation somewhat.

A. Tests of strength are important tests to administer. Either Roger's Strength Index or McCloy's adaptation of it are satisfactory to a reasonable degree.

"Strength relative to weight and maturity is one of the most important things to develop in physical education. The strength test not only gives the teacher the information he needs concerning the condition of the pupil, but serves as a motivator. In addition to this, when the strength test in the form of the Physical Fitness Index is combined, it becomes very nearly an ideal predictor of athletic ability."  

B. The Classification Index consists of age, height, and weight combined into the formula 20 A (in years) plus 6 H (in inches) plus W (in pounds), and is simply a measure of size and maturity. It is of value only with boys. For some reason, it does not apply to girls. This should be

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computed with boys at the beginning of each semester. With girls, age is of some value up to fifteen and one-half years, but not beyond.

C. Tests in track and field athletics usually take the form of scoring three or four events on some form of scoring table and using the sum of the scores as the index of track and field ability. There is adequate proof that track and field athletics offer about the best battery for testing general motor ability that is known. They include skills or racial activities common to almost all sports, proficiency in which transfers to a very large degree.

In combination with the Classification Index for boys, or age alone for girls, it may be put in the form of an Athletic Quotient, which interprets the individual's ability in terms of his size and maturity and compares him with his fellow students.

These uses of track and field events, if properly organized, are excellent motivators for training and improvement in these events, and apparently are quite fundamental in the physical education program.

D. The profession of health and physical education needs more and better tests for sports skills. They may be used for the grading of achievement and the motivation of practice. These should be simple, should be capable of being administered to groups or squads, and as objective as

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possible. Where it is not possible to measure these skills objectively they should be rated. The most commonly used device is to rate them in five categories: Excellent (the best ten per cent); Good (the next twenty per cent); Fair (the middle forty per cent); Poor (the next twenty per cent); Very Poor (the poorest ten per cent).

E. Pencil and Paper Tests should be used primarily only in schools offering an adequate amount of time for the physical education program. They may be used to give tests in rules, in techniques, and in health knowledge. Another use would be for the teacher to administer objective tests, have pupils exchange papers and grade, and then use the results as the basis of discussion and learning. This type of thing can be readily overdone, particularly if grades are given.

F. There are not very many good tests which may be used for Character Ratings. The Bogardus "Social Distance Test" is probably the best. C. H. McCloy has written another one called "Character Building Through Physical Education".

The important thing in this connection is for the teacher to make an attempt to observe individuals and to analyze the children's strong points and shortcomings in game situations. It is poor technique to single out an individual to observe and make him the center of attention. These character ratings should be simplified as much as possible and there should be a constant revision, perhaps
recording them under observed fundamentals of behavior.

G. Cardio-vascular Tests are important, but their uses will depend upon the amount of responsibility for health supervision that is placed upon the teacher of health and physical education. If medical supervision is either entirely lacking or inadequate in amount, these tests make real contributions.

The Pulse-Ratio Test\textsuperscript{35} is used by coaches to determine the athletic condition of a player. A teacher may also want to know how much exercise should be given to an individual. This test may also be used by a physical educator who wishes to check on the probable condition of the heart.

Mr. C. H. McCloy has devised a test which is known as "A Cardio-vascular Rating of 'Present Condition'.\textsuperscript{36} It is used to determine the general present health conditions of the individual, a condition which may fluctuate markedly from day to day. Its primary usefulness in the schools is a check upon the condition of pupils who have been out of school with illness to determine when they are ready for full participation in either the general physical education program or the competitive athletic program.

\textsuperscript{35}W. W. Tuttle, "Use of the Pulse-Ratio Test for Rating Physical Efficiency", Research Quarterly II:2, May, 1931.

Campbell's Pulse Ratio Test, "Weight, Vital Capacity, Pulse Rate Before and After Exercise and Physical Fitness in Health". Guy's Hospital Reports, Vol. 75, No.1-4, 1925, p. 263.

In the administration of a testing program it has been pointed out that certain of the tests are given only every three years. In other words, only one class out of three is tested each year. These tests can be given in two class periods. The Strength Tests, the Classification Index, and track and field tests should be taken twice a year. This group can usually be administered in not over two class periods if there is a well organized leader's group, granted, of course, that the equipment is adequate.

Pencil and paper tests and sports achievement tests should be introduced as the occasion demands, and many of them, particularly some of the mass tests, are simple parts of the regular activity program of which records are kept.

The character ratings do not take time from the teaching, but occupy much of the instructor's thought and cause him to give attention to each individual.

The time taken for cardio-vascular tests is very little, as these will be indicated for relatively few pupils.

After considering the classification and evaluation of students it appears:

"The best educational results from physical education will come only when a relatively large emphasis is placed upon the needs of the individual. This involves a knowledge of: (1) his various innate capacities or potentialities for development; (2) the level of skills and abilities to which he has attained, both abso-

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lately and as related to his capacities; (3) a diagnosis of the reasons for apparent specific disabilities or shortcomings; (4) an adequate sectioning scheme which will insure for the pupil an optimum opportunity for educational as well as purely physical development; (5) standards, adapted to individual capacity, for motivation, and for use in grading and promotion — promotion primarily for better educational opportunity, not just as a sort of prize."

Almost all forms of testing require some type of rating or grading. Perhaps the greatest advantage in grades is the establishment of some basis whereby the teacher is better equipped to help the pupils. Occasionally marks become an end in themselves for some individuals; this is the most injurious feature of their use.

A grading system fulfills several functions in education. In the first place marks are used for promotion, graduation, college entrance and college graduation. They give the student an estimate of the quality of his work and his standing in regard to meeting the necessary requirements for promotion. Health and physical education should then employ as objective measures of accomplishments as possible. "Definite standards in all phases of physical education including personnel, time allotment, credit, programs, teaching, methods, classification, and achievement of pupils -- as well as for grading -- must be set up."38 The questions of how these standards are to be set up, and the criteria for their selection are problems that should definitely concern

all teachers of health and physical education.

Whatever method of marking the school uses in general for determining pupil standing in academic subjects, should also be used by the health and physical education teacher. This branch of education will not be looked upon by the other departments, and by the pupils too, as outside the educational fold. "There are at present nine methods of giving marks in physical education as follows:

1. Two groups: passing or failing.
2. Minimum standard with additional points for additional performance.
3. Three groups: inferior, average, superior.
4. Five-division plan: A-B-C-D-E.
5. Percentage system on scale of 1-100.
6. Point system.
7. Increased points on a scale of values for equal performance increments.
8. Increased points for increased performance around a median.
9. Class-ranking system."

Of these nine methods, the five-division plan seems to meet with the most favor. There is a Missouri plan for distributing the grades of this system of marking by dividing them as follows: A to three per cent of the group, B to twenty-two per cent, C to fifty per cent, D to twenty-two per cent and E to 3 per cent. The Cattell plan divides the grades a little differently -- A to ten percent, B to twenty per cent, C to forty per cent, D to twenty per cent and E to ten per cent.

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Rogers maintains that marks should be "based on strictly objective tests, properly normed and with predetermined standards for A, B, etc., so that it will be possible for all to receive the highest mark." He criticizes the limiting of the number of any given class who may be awarded a certain mark. It does seem that, in the name of justice and fair play, all pupils who reach the standard that has been predetermined as the standard for a specific level should be given that standard's rating.

A subjective mark is the mark representing the teacher's opinion or judgment. It is not necessarily based on facts. As a matter of fact the teacher may or may not have factual information collected together. Even so a teacher may interpret factual information in a subjective manner. It seems somewhat impossible to eliminate the subjective completely even should it be desired.

The nearer the mark approaches complete objectivity, the more certainly the pupil can determine his grade provided the objective system of marking is made public. This eliminates all chances for guesses at what the mark will be. When a pupil receives a mark higher than he feels he deserves, he loses respect for the teacher's judgment. On the other hand if he receives an evaluation which is lower than he thinks he deserves, he feels resentment.

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40 Rogers, F. R., "The Significance of Strength Tests in Revealing Physical Condition". Research Quarterly of American Physical Education Association, October, 1934, pp. 43-44.
A marking system that is wholly objective has its faults. It would eliminate worthy considerations such as attitudes and cooperative endeavors of one pupil in relation to the efforts of his teammates. One may be able to pass 100 per cent in all objective tests in basketball, such as goal throwing, accurate passing, skillful guarding knowledge of rules, but still be a poor teammate in the actual playing of the game. As yet there are no adequate tests devised to measure, objectively, playing ability and cooperative efforts and, until such tests are devised, subjective marking on these points must be used.

Before 1930, marking in physical education was done by the subjective method almost completely. Such things as attendance, sportsmanship, hygiene, attitude, initiative and ability were used to grade students. Recently there is a definite swing away from the inclusion in marking of such items as physical efficiency, posture, hygiene, etc. These items are important, but they are expected outcomes and not the main issues upon which the pupil is at work. Today performance or achievement in the course is the main factor in evaluating students.

Methods and techniques in education have changed considerably within the last twenty-five years with one exception, the grading system. Williams and Brownell points out that: 41

41 The Administration of Health and Physical Education.
"A sound grading system should be based upon a number of items, such as objective tests of achievement in a variety of activities; knowledge tests that cover the areas of activity and that of general physical education, including its aims, purpose, backgrounds and results. It must be determined whether or not and to what extent knowledge of an activity relates to participation or to skill in participation. To use knowledge tests otherwise is without any justification whatsoever . . . .

The actual evaluation of students should be in light of how far they have traveled towards the objectives of the program and the school. To do this it becomes necessary to know from what point students start and how much they have achieved.

For example in health service a teacher will need to know the results of each health examination. The follow-up program definitely depends on it. He must have the information before he can adjust the academic program to fit the students' defects. This information is also essential if the physical educator is to interpret the findings to the parents. Without it he would be at a loss about giving adequate supervision and care to the conduct of physical education activities.

Concerning health instructions it is important to know which direction the health conduct of each student has progressed. If student needs form the basis for the selection of subject matter, an instructor must find out if those needs have been met and if not, why not. The director must also determine if adequate situations have been established which contribute to good health, high ideals, decent standards, and
good attitudes.

In physical education some check must be made on pupil progress towards the physical, social, mental and emotional objectives. One indicator may be the habits of wholesome recreation. A physical education program must also widen the range of activities which are real and stimulating to students.

Adequate observations by the teacher, should be made and recorded concerning the kinds of student behavior that indicate growth toward the achievement of the program's objectives. Other elements such as the approval of society, acceptance of responsibility, development of sportsmanship and fair play, etc. are worth while characteristics that should be checked.

Activities concerned with health and physical education automatically place students in situations which present problems to them. In football for example, each player continuously tries to out-wit and out-play his opponents. This means discovering and solving problems. Class discussions and informal conversations both on and off the playing field provides opportunities to develop this reflective thinking.

The field of health and physical education has two very good ways of evaluating the understandings that students may have in its program. The simplest method is to ask students questions about health and games. The best way to do this though is to catch their understandings actually functioning in their thoughts or actions as they take part
in the program.

The purposes of any worthwhile evaluation program is to discover student needs, to appraise his achievements and to guide his progress. Test records from all parts of the school should be brought together, studied completely, and synthesized into a unified picture.

Summary

1. In order to stimulate interest in the program, a teacher should make every reasonable effort to broaden the interests and enrich the experiences of his pupils. (p.164)

2. A student should have a purpose, self-inflected, for the activities in which he takes part. (p.168)

3. It would be worthwhile throughout the school life of children, for teachers to select and organize an activity program in which boys and girls play together frequently. (p.172)

4. Through coeducational classes in physical education boys and girls should become accustomed to playing together correctly and without self-consciousness in the presence of the opposite sex. (p.173)

5. Classifying and evaluating students may be understood to mean the grouping of students for instruction and for judging their position in relation to their development. (p.181)

6. The characteristics of usable tests and measurements in health and physical education are: validity, reliability, objectivity, administrative economy, and
established norms.

7. Pupils should be classified and grouped in terms of educational objectives. (p.186)

8. The actual evaluation of students should be in light of how far they have traveled towards the objectives of the program and the school. (p.203)

9. The purposes of any worth while evaluation program is to discover student needs, to appraise his achievements and to guide his progress. (p.205)
Chapter VII

Summary and Conclusions

Health and physical education as a phase of education has always presented various problems. The nature of the difficulties have changed from year to year until in 1938 they have taken the form of financial problems, adequate health and physical education programs, and efficient teaching methods. Any tasks may be considered to be "Serious Problems" if they either directly or indirectly interfere with the desirable development of health and physical education.

Society has long felt the need for an adequate program of health and physical education as a part of the school curriculum. One of the functions of health and physical education is to alleviate some of the evils of unnatural living. Education can aid society in overcoming its difficulties if it is thought of as a continuous lifelong process of change. Activities which will bring this about must be intelligently planned and directed.

There is a need for a study of this type since many of the public schools of Ohio are confronted with the task of maintaining a complete program of health and physical education in view of the economic crisis which they are facing. Many curriculums are suffering vital modifications. Each school needs authoritative suggestions to help solve their problems.

As a result of the questionnaire which was sent
on January 3, 1938, it was found that many schools do not have a teacher of health and physical education and the responsibility of teaching this work has been placed in the hands of some other member of the teaching staff. Other schools are forced to pay low wages and receive a low standard of health and physical education. Still other schools may have well trained teacher, but no teaching materials, equipment, or facilities are provided.

It is desirable to maintain at least the present standard for curriculums in face of the economic crisis. A person must be considered by both his intellectual abilities and his physical abilities. One of these cannot be found without the other in a desirable person. He must have both. How, then, can training be established for intellectual abilities as a separate unit?

This study has been based on the Annual Principal's Reports, interviews with numerous school executives, plus an additional informational sheet which was sent directly to one thousand (1000) schools in Ohio. Many questions received were classified into similar groups and automatically fell into the chapter headings because of their nature. Numerous other questions were asked, but they were either personal or local questions which were serious only to the person or locality and not serious in regard to health and physical education as a profession.

The principles of outstanding people in the profession have been adopted throughout the study. Their
thoughts and suggestions have been included as possible solutions for the problems. This was done largely through readings of universally accepted books and articles connected with the profession. Opinions of administrators and teachers were asked for during personal interviews.

The School Laws of Ohio place the responsibility on the local school boards for a balanced program of health and physical education. The laws encourage a program that is educational, but definitely discourages "professional athletics" which detract from an individual's desirable development in regard to the objectives of education.

A careful and complete investigation should precede the purchase of facilities and equipment. This investigation, made by competent people, should include the needs of the school, the aims and objectives of the proposed program, and the possibilities of offering every educational advantage possible.

Several teachers in the public schools, that are interested in health and physical education, have suggested that the State Laws should be altered so that the local board of education can support, promote, and control interschool games. This would involve the changing of the laws in order to permit such a thing.

Textbooks may be useful in a well-rounded curriculum of health and physical education if they are not used as an end in themselves. Few, if any, textbooks provide for individual needs and differences nor do they take
into consideration the place of an individual in a democracy. Teachers should understand that the way in which learning experiences are organized is of great importance in achieving the characteristics of behavior necessary for the full realization of educational values.

There is a trend today in health and physical education of placing too much emphasis on winning and too little on the other values of the field. Many schools have money to "win", but not to carry out a well rounded program. The profession of health and physical education should be represented by only well trained and qualified teachers. In order to overcome the "winning fever", these highly qualified teachers must help to educate the public. They must show the relation of their high ideals to real life situations.

The administrator of health and physical education is responsible for the integration of the objectives of the program, the activities of the teacher and pupils, and the materials that are used. He should manage these matters in such a way that they provide for the effective teaching and the guiding of pupils.

It is impossible, at this time, to determine the nature of the new society of the future. For this reason, the planning of an educational program of physical activities must involve great flexibility and breadth. This has been provided for by the State Department of Education in their recommendations of a School Health Service, Health Instruc-
tion and Physical Education.

An annual health examination for every boy and girl and a seasonal examination for every athlete is a recommended or ideal program. Health examinations are of little value when they are not accompanied by an adequate follow-up program. There should always be a reputable physician in charge of every health examination and nursing program.

The principal aim of health instruction is the development of intelligent health conduct. If education is life, and if it is society's desire that children shall have more abundant life, school authorities must give attention to the health of the children both in and out of school. This means that every school should have some well defined program of health. The ultimate criterion for judging the success of the teaching program is the health conduct of individuals.

That aspect of the health and physical education program concerned with the physically subnormal students is known as individual physical education. It employs two types of activities namely; those for correctives and those for restrictives. "Formal correctives" are giving way to games which have a definite contribution to make to the correction of functional defects.

The people of America are beginning to realize that if the aim of education is to develop the whole child then something must be done about his sex life. In order to
inaugurate such a program in the Ohio schools, it would be necessary to start with those agencies which control the curriculum content.

The use of visual aids should be a natural outgrowth of the pupils' needs for concrete experiences in the furtherance of some interest which they hold. Visual education is still in its infancy and there is yet to be learned a great deal about its uses and techniques.

The term, scheduling as used in this study, deals with those problems of incorporating health and physical education within an already overcrowded schedule of academic subjects. Health and physical education should be placed on the students' schedules at the same time and in the same way as other subjects. It is difficult to give general advice on scheduling because of the local differences in number and length of periods in the school day.

The aims of the intramural program are the same as those for the entire curriculum, namely; education in leisure, organic development, and social adjustment. This phase of physical education partially fulfills the total activity needs of the pupils and motivates further satisfactory types of activity. A large variety of activities should be offered throughout the year to reach the seasonal interests of all types of individuals.

The wants, needs, and interests of a person provide the initiative and basic motivation for most of the activities in which one participates. Teachers can contribute
to a student's interest by seeking to improve the quality and increase the number of interests and wants of their pupils. In many cases the main problem in physical education is not so much to arouse interest as it is to keep from killing the interest children already have.

There are many educational advantages of coeducational activities. Boys and girls should become accustomed to playing together correctly and without self-consciousness in the presence of the opposite sex. The capacity to play happily together should mean success in personal relationships. The problem, facing coeducation in recreation, is how can life situations be created in which boys and girls study and work together.

Classification tests seek to determine the capacity of the individual in the light of some standard: achievement tests, on the other hand, aim to measure what the individual can do, what he knows, the knowledge and skills he actually possesses at the time the test is given. The national survey of secondary education shows that twenty-five per cent of the schools studied use physical performance tests and that the testing program, if any, is still largely in the stage of local experimentation. Tests and measurements may be used for the determination of children's innate capacities. Once these are known they may be used to serve as a background for classification in terms of educational objectives.
Conclusions

The following conclusions are implied from the results of this study. They are made after due consideration of the sources and data of this thesis. Their influences in terms of health and physical education will depend on the action taken by the teachers who are in a position to solve them.

1. Problems which confront health and physical education should be of major concern to all who are interested in the field. (Ch. I, p.2)

2. In view of the poor economic conditions which have existed during the last ten years (1928-1938) the health and physical education programs are suffering vital modifications. (Ch. II, p.9)

3. Each school needs authoritative suggestions to help solve their problems. (Ch. II, p.10)

4. It is desirable to maintain at least the present curriculum in face of the economic crisis rather than to loose ground. (Ch. II, p.11)

5. Each school is an unique institution and its problems are different from one another due to the great difference found within the individuals who compose it. (Ch. III, p.14)

6. It is obvious that the solution for a particular problem in one school may differ from the solution of the same problem in another school. (Ch. III, p.18)

7. Standards, requirements, and modern develop-
ments in health and physical education should be recommended to each local board of education. (Ch. IV, p.25)

8. It is generally assumed that health and physical education is a phase of education, therefore, it should receive the same financial consideration as any other school subject. (Ch. I, p.4 and Ch. IV, p.35)

9. The particular needs of the adolescent in any given community will vary and they can only be discovered by a careful study of the group of students for which a given program is being developed. (Ch. IV, p.32)

10. Many schools are taking the prize off winning by cutting their schedules and developing an extensive intramural program. (Ch. IV, p.36)

11. Before an administrator can make his maximum contribution to the health and physical education program, he must have a clear conception of the aims and objectives and a thorough understanding of his place in the educational picture. (Ch. V, P.39)

12. If a teacher is to have any sense of direction concerning his work in health and physical education he must be supported by an administrator who is consistent with a sound social philosophy and a philosophy of education. (Ch. V, p.41)

13. It has been found by this study that such things as establishing objectives and levels of achievement, and the evaluation of accomplishments are dealt with in a haphazard and inaccurate manner in many public schools of Ohio. (Ch. V, p. 44)
14. In view of progressive education the "core curriculum" seems to be the best solution for providing a "balanced diet" of activities covering several major fields. (Ch. V, p.59)

15. A physician should administer a health examination to every child in order to determine the presence or absence of disease and organic and functional disturbances. (Ch. V, P.74)

16. The health conduct of individuals is the ultimate criterion for judging the success of the teaching program. (Ch. V, p.96)

17. Educating for national health is an integral part of the whole program of public instruction. (Ch. V, pp.99-100)

18. Games have a definite contribution to make to the correction of functional defects. (Ch. V, p.113)

19. The responsibility for a sex education program does not rest with any one educational agency, but is a cooperative enterprise of the community, the church, the home and the school. (Ch. V, p.123)

20. Sex education can never be separated from the general curriculum as an individual course until educators know more about it. (Ch. V, p.124)

21. Visual aids supply accurate concrete experiences which are presented in such a way that they are life like. (Ch. V, p.130)

22. In order to provide for health and physical
education in a so-called over-crowded academic curriculum the school could adopt the seven or eight period day and then use the last period for this program. (Ch. V, p.138)

23. A school program of intramural sports should be so organized and administered that it includes opportunities for all students to participate. It should never be a compulsory program. (Ch. V, p.148)

24. Some schools have found it helpful to include the intramural program in the regular physical education classes. (Ch. V, p.156)

25. Putting into actual use the skills which have been learned in physical education classes is one of the most effective means of associating satisfaction with the learning of motor skills. (Ch. VI, p.168)

26. Health and physical education affords many opportunities to practice courtesy, respect, and social living for both sexes providing they are permitted to work and play together in a corecreational program. (Ch. VI, p.172)

27. Medical and physical examinations should be supplemented by physical capacity, motor ability, and physical achievement tests if students are to be assigned class work intelligently. (Ch. VI, p.184)

28. Health and physical education should be placed on the student's schedule at the same time and in the same way as other subjects. (Ch. VI, p.190)

29. A testing program can and should be organized so that certain of the tests will be given only every three years, others once or twice a year and some seasonally
according to the sport to which the test is related. (Ch. VI, p.191)

30. Whatever method of marking the school uses in general for determining pupil standing in academic subjects, should also be used by the health and physical education teacher. (Ch. VI, p.200)

31. The actual evaluation of students should be in light of how far they have traveled towards the objectives of the program and the school. (Ch. VI, p.203)

In conclusion, it is to be hoped that this thesis may serve as a worthy aid in promoting the progress of health and physical education to the point where every boy and girl in the high schools of Ohio will have the opportunity in the future of participating in a program of health and physical education so necessary to the all-round development of the individual.
SELECTED
BIBLIOGRAPHY

Books


Neilson, N. P. and Cozens, F. W. Achievement Scales in Physical Education Activities for Boys and Girls in Elementary and Junior High Schools. Sacramento, California:


Ohio School Laws, General Code, Section 7721.


Magazine Articles


Campbell's Pulse-Ratio Test, "Weight, Vital Capacity, Pulse Rate Before and After Exercise and Physical Fitness in Health". Guy's Hospital Reports, Volume 75, No. 1-4, 1925.


Ohio Public School Bulletin, January, 1938


Sargent, D. A. "The Physical Test of a Man". American Physical Education Review, 26:188, April, 1921.


"Sex and Social Health", The American Social Hygiene Association, 1924.


**Unpublished Material**


Metcalf, H. G. Individual Physical Education Course 630, Summer School, Ohio State University, 1935.

Richards, H. R. "The Teaching of History Through Visual Education and How It Might Be Used in the City of Columbus". Unpublished Master's thesis of Ohio State University.

APPENDIX

A Classification of the Types of Serious Problems Facing Health and Physical Education in Ohio

The term "Serious Problems" as used in this thesis may be considered to mean those urgent situations in the public schools of today (1938) which either directly or indirectly interfere with the desirable development of health and physical education. They are problems because they do not provide the necessary environment, organization, management, personnel, and materials for effective teaching or learning. They are serious because they are jeopardizing the values which one expects to receive from health and physical education.

The investigation included five hundred and fifty-seven (557) schools ranging from twenty-six (26) students to nine hundred and sixty-nine (969) students in size. Fifty-three (53) of the exempted village schools cooperated by answering the informational sheet that was sent directly to them. The percentage of questionnaires returned was 55.7% of the original one thousand (1000) sheets that were distributed.

The following is a grouping of the "Serious Problems" as they appeared in the informational sheets and as they are dealt with in this thesis.
Number of schools seeking solutions

A. Financial Problems

1. The school boards’ attitudes towards the purchase of equipment . . . . . . . . . . 28

2. Lack of equipment -- money to supply adequate facilities . 28

3. Unsatisfactory understanding of an adequate program of health and physical education by the people of the community. 75

4. Supply an adequate list of good textbooks for health and physical education . . . . 32

B. Health and Physical Education Program

1. Lack of administrative understanding -- also lack of support . . . . . . . . . . 61

2. Need for definite material on how the State Department of Education wants the program of health and physical education conducted . . . . . . . . . . 82

3. Health examinations -- objections of parents -- financing them -- cooperation of physicians -- follow-up program . . . . . . . . . . 70

4. School lacks health instruction in its program . . . . . . . . . . 74

5. Individual physical education lacking correctives -- no needed provisions provided for the handicapped . . . . . . . . . . 46

6. How should sex-education be dealt with in the school's curriculum? . . . . . . . . . . 31

7. More films needed for sports technique and for health instruction . . . . . . . . . . 27
8. Scheduling-time for physical education classes in the regular school schedule ........................................ 92

9. Arranging and administering an intramural program ................................................................. 31

C. Teaching Methods

1. Arousing interest in the program -- "Let John do it". "Sideline-itis" ........................................ 61

2. Problems of boys and girls playing together ............................................................................. 33

3. Classification of students in classes. What is a good basis for giving or allowing or awarding grades in physical education? .................................................. 39