

AN EVALUATIVE STUDY OF PHYSICAL EDUCATION
ACTIVITY PROGRAMS FOR BOYS IN SELECTED
JUNIOR HIGH SCHOOLS OF TEXAS

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**AN EVALUATIVE STUDY OF PHYSICAL EDUCATION
ACTIVITY PROGRAMS FOR BOYS IN SELECTED
JUNIOR HIGH SCHOOLS OF TEXAS**

THESIS

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By

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CHAPTER I

INTRODUCTION

If physical education is to justify its part of the total educational effort of the public schools, more attention should be devoted to those boys among the neglected many and not entirely concentrated upon the chosen few. From an educational standpoint, physical education is not merely a play period or a form of loosely supervised recreation. The instructional phase, or activity program, contains a wide variety of sports and games and related responses to these learning situations which present many teaching opportunities. Physical education has a contribution to make toward the over-all development of each individual in the program. The curriculum, therefore, should be as well planned and as professionally executed as any other area in the total course offerings (9, p. 196)*.

Several unique problems exist in the area of boys' physical education. In general, there is an established and properly functioning program of interscholastic athletics (which

*The number in parentheses is the same as the one in the Bibliography at the end of the chapter. The first number refers to the author and title while the second number refers to specific pages.

are a part of the broad field of physical education) with little or no attention directed toward the conduct of instruction in the various activities offered during the daily class period (9, p. 304). Adequate facilities and equipment are usually available, but their use is not fully employed for the benefit of the average boy, through a well-planned instructional period (1, pp. 230-32). The men employed to teach boys' physical education are expected to carry a full teaching load during the school day and then perform the many functions of a coach, following the close of the regular classes. While extra compensation is paid for these additional duties, it is the feeling of a number of teachers that their salary is for coaching and not for teaching. The community tends to evaluate the physical education program not on the basis of how well the needs and interests of the boys are being met, but rather on the win-loss column (11, p. 83).

Statement of the Problem

The problem undertaken in this study was to evaluate the activity phase of boys' physical education programs in selected junior high schools of Texas.

As a result of visitation and observation in a number of public junior high schools in the capacity of supervising teacher for physical education majors, it appears that many physical education programs were little more than loosely supervised play periods. Apparently there was room for

improvement of these programs but a method for making judgments and recommendations required some type of measuring devise. However, an examination of several existing measuring techniques failed to reveal any one devoted to the junior high school level or one concerned primarily with the activity program. As a means of improving existing programs, it was concluded that some new form of evaluation must be designed.

The specific purposes of this study involved the discovery of answers to the following questions;

1. What is the status of the activity phase of boys' physical education programs in selected junior high schools of Texas?

- a. What activities are included in the program?
- b. What is the extent of the use of each activity?
- c. What is the curricular placement of each activity?
- d. What is the time allotment for each activity?
- e. How adequate are the playing areas for each activity?
- f. How do teachers evaluate the various activities in terms of contribution to the activity program?
- g. What are the teachers' plans for improving the activity phase of their program?

2. To what extent do present policies and practices in the activity phase of boys' physical education programs meet the accepted principles and standards in the field of physical education?

- a. What general principles bearing on this problem can be established and documented as educationally sound?

b. What policies and practices involved in the activity programs of boys' physical education can be established as bearing directly upon each of the general principles established?

3. What evaluative procedures, techniques, or instruments will yield information which will assist in answering the questions in 1 and 2 above?

One of the problems undertaken in this study was to develop an evaluative instrument for appraising boys' junior high school physical education activity programs and to apply that instrument to the programs in selected school in Texas. The examination of data, obtained from an evaluating instrument, should indicate the degree to which present practices and policies of physical education programs in the junior high schools are meeting the principles and standards of the field and should also provide bases for curriculum improvement. Through careful consideration of such information, teachers and administrators in a particular school would have specific steps to follow toward program improvement. Application of these data, gained from the evaluating instrument, would: first, indicate the strengths and weaknesses of the activity program; second, the need for additional facilities and equipment; third, provide a basis for recommendations for over-all improvement.

Significance of the Problem

Investigation and observation of physical education programs in operation indicate a need for an established course of study. Data gained from the application of the evaluating instrument, constructed in this study, might be used as a basis for recommendations for a course of study.

The following observations indicate a need for this investigation:

1. Generally, there is more emphasis upon the physical education period at the junior high school level than is the practice in the senior high school.
2. There are established principles of physical education upon which the activity program should be based.
3. Although evaluating instruments exist, they are not primarily concerned with the activity program but deal with all of the related areas of physical education.
4. The Texas Association of School Administrators accepted a first draft of proposed standards for physical education in grades one through twelve to be used for accrediting purposes. Until this acceptance in 1954, no standards had been established for Texas schools. This group of Texas school administrators has since published a bulletin with these standards, Bulletin Number 4 dated September, 1955 (10). (See related studies for further information.)

The scale constructed as a part of this study would be useful in measuring the activity programs in junior high

schools to determine the degree to which these proposed standards are being met, since the standards of Bulletin Number 4 and this instrument are based upon the established principles of physical education.

There are a number of possible effects which the results of this study might have. The scale offers a means by which self-evaluation can be conducted with program improvement as the objective. The results would show how many programs in the various schools studied were poor, fair, good, or excellent and would provide a basis for upgrading the programs of these institutions. The information accumulated from use of the scale would serve as a guide for future planning in the betterment of the physical education experience for boys. Results examined by an administrator might point up the need for more support on his part in offering a wider variety of activities, or for some other necessary addition. Data obtained from the use of this instrument would be of service to the school in acquainting parents and the community with the purposes of physical education and to inform them of what the school is attempting to do in this area. The development of a statewide pattern for a suggested course of study might emerge if a number of schools should use this instrument in evaluating their activity programs. This could result in a more nearly sound program providing physical education for those who need it most. And finally, through comparison of relative merits of the programs of different schools there

could be an exchange of information which would aid each teacher in his efforts toward program revision and consequent improvement.

Limitations

In order to accomplish the purpose of this study, to evaluate the activity phase of boys' physical education programs in selected junior high schools of Texas, it is deemed expedient to limit the scope to the activity phase of the program. In addition, the following are established as limitations for this study:

Since the number of schools involved represent only a portion of the total number of schools in Texas, there are limitations due to sampling.

The fact that the sections of the state included might not be representative of the entire state, is a limitation.

The "halo" effect must be deemed a definite limitation since there was, in all probability, a tendency upon the part of the person interviewed to rate his particular school somewhat higher than it deserved.

While the principles for girls' and boys' programs are similar in many respects, this study is concerned only with the boys' phase. The broad field of physical education includes intramural sports, interscholastic competition, safety, health education, and the instructional class periods of the

activity program. Each of these areas of physical education is sufficiently large for separate research.

Method of Procedure

The first step in the construction of the evaluative instrument involved extensive examination of the literature in physical education. From this information the items that pertained to activity programs was compiled. The bases for these items were actually the principles of physical education which will be documented later in the fields of psychology, sociology, and biology. Upon closer scrutiny, many related and repetitious statements of principles were revealed; where possible these were combined. As this sifting out process was continued, there emerged ten principles which seemed to be most widely accepted and most indicative of good activity programs. Ten major headings were decided upon as the basic factors in program planning; under each of these headings questions were asked which would indicate the degree to which a particular school was meeting the established principles for good programs. The degree of how closely a principle was being met was based upon how the "YES-NO" questions were answered and indicated on a number scale with a low of zero and a high of five.

The first draft of the evaluating instrument was administered in three junior high schools in personal interview and it was found to be lengthy with a number of repetitious items.

Several editing efforts decreased the number of items and a better method of scoring was devised for measuring the degree to which the principle was being met. Instead of the number scale of zero to five, zero to eight was used, representing one number for each of the eight questions. Thus, a score was based on the number of "YES" answers with a total score of eight for each principle. The possible score was increased to eighty--with ten principles and eight questions for each.

Personal interview was decided upon as a reliable means for collecting the data. It seemed apparent that a visit to the schools with an on-the-spot interview, combined with observation, would yield responses which more nearly represented the true situation. Each visit lasted for at least one and one-half hours. Time was used to inspect the building and the physical education facilities. After obtaining permission from the principal, the physical education teacher, designated as departmental head, was interviewed.

A trial study was conducted in order to determine whether the instrument would measure the program adequately. Several qualified individuals were asked to suggest five junior high schools with good activity programs and five with poor activity programs. None of the persons contacted would designate schools having either good or poor activity programs because, in their opinion, there was no basis for defining such conditions. A former president of the Texas Association for Health, Physical

Education and Recreation, who conducted a doctoral study of girls' activity programs in Texas senior high schools, was asked to indicate five schools in the state which have good programs and five which have poor programs. Since this person had gained statewide recognition in physical education, it seemed that her knowledge of programs in general would be of value. Although her study was concerned with girls' programs, her position and experience qualified her to indicate schools which had good or poor programs. However, she refused to list the schools in either of these two categories stating that she had no basis for such a rating. But a list of schools was supplied from which ten schools were chosen at random for the pilot study.

The wording of several items was changed after the pilot study and several questions were deleted which did not appear to have a direct connection with the physical education program.

An outcome of this study was to apply the evaluating instrument constructed to the junior high school education activity programs in fifty-three schools, and on the basis of the information collected make recommendations for the improvement of existing programs.

Related Studies

The College Physical Education Association (in 1927) appointed a group known as The Committee on Curriculum Research with William La Porte as chairman (3). For nineteen years

this committee worked to develop a comprehensive, graded program which would assure a common ground of basic skills with enough flexibility to be used in most situations.

The committee called upon representative leaders in the field from various sections of the country. Each year the previous work was reviewed to indicate what progress had been made. The content of the twelve-year program of physical education, which this group established, was based on the best available judgment of outstanding leaders from widely distributed geographic areas.

Using the findings of this committee, La Porte devised a score card for junior and senior high schools. This instrument measures the total health and physical education program. There are ten major areas with ten sub-areas under each major heading. Each item is assigned a value, either one, two, or three with the latter being the highest value. The total possible score is 300, any part of this sum representing the degree to which a particular program meets the La Porte standards.

This is an excellent scale but it does not sufficiently examine the activity program or yield complete data for improvement. However, it was a valuable source of information for the construction of the instrument proposed in this study.

Mary Buice constructed a "check list" to measure the undergraduate professional physical education programs in institutions of higher learning in a doctoral dissertation at

the University of Texas in 1952 (2). This check list is based on the competencies related to physical education as listed by the National Conference Report (5). The conference participants and other recognized leaders were used as judges.

These men were requested to rate the list of items on a five-point scale, zero through four. A pilot study was conducted at the University of Texas in an effort to find weaknesses of the check list. Buice had 127 major headings but reduced these to seventy-four with 507 sub-items. From the assigned values by the judges, the mean score of each item was computed, and scores at or below the twenty-eight percentile were eliminated.

In 1928, N. P. Neilson, as State Supervisor of Physical Education in California, was asked by a high school principal to evaluate the physical education program in a particular school (6). In complying with this request Neilson became aware of the fact that those who evaluated programs relied upon subjective judgment of a rather general nature because no instruments for measurement existed. Efforts to construct such a measuring device were begun by Neilson, who used the physical educators in California as judges. During conferences held in the various regions it was decided that score cards should be constructed for the areas of health service, health instruction, and recreation and that separate score cards should be formulated for the physical education programs on

the various school levels; different sets of score cards would be necessary for boys than those used for the girls.

After all of the desirable units had been developed, the score cards were sent to fifty men in California who held important positions in physical education. These experts were asked to render judgment on the score card, by first allotting 2,000 points to five major headings and then distributing these allotments to the various units. Tabulations were made for each unit, thus obtaining the range and the median of the decisions.

In 1948 Neilson revised the score cards. He made the necessary adjustments in the senior high school cards so they could be published for use in the junior high schools.

A doctoral study by Price (7) in 1946 surveyed the objectives of physical education and reduced them to a common denominator in terms of physical education and the sciences of biology, psychology, and sociology. General principles basic to these sciences were validated and shown to be specific principles which represent guiding rules in the methodology of physical education.

A systematic analysis of objectives was made and classified into three divisions: prior to 1900; 1900 to 1920; 1920 to 1935. Twelve scientists (three from each science of biology, psychology, physiology, and sociology) suggested authoritative books from these areas and evidence was compiled from these sources for substantiation of the principles.

Price established fourteen general principles and for each one suggested the implication it had for physical education. Specific principles were reduced from the implications to physical education in terms of methods. This was done by treating the factors of a teaching situation: the learner, the conditions in the physical education environment applicable to the principle, the activities, the leader, and the standards. Effective methods can be derived from these specific principles and serve as guides for more effective teaching.

In 1951 Alvera Griffin made a survey of twenty-four senior high schools in the Gulf coast area in an effort to evaluate girls' health and physical education programs (3). Two questionnaires were sent to each of the schools, one was to be answered by the superintendent or principal, the other by the girls' physical education instructor. Griffin later visited the schools and collected the forms and interviewed the persons who had completed them. From these questionnaires an evaluation and case history was made for each school visited.

Items on the rating sheets were based upon a report of specific standards necessary for an adequate program by the American Association for Health, Physical Education, and Recreation published in 1935. The rating sheets were made when research by Griffin revealed no such instrument for evaluating the health and physical education programs for schools. It was found that these standards represent only minimum levels of attainment necessary to an adequate program.

Among some of the findings of this study the following have direct connection with the present research problem:

1. Adequate facilities are reported in 33 per cent of the schools, while 79 per cent of the schools have adequate equipment for the programs of health and physical education as outlined by the particular school.

2. The data indicated that eight of the twenty-four schools teach at least twenty different activities.

3. An intramural program is planned by 60 per cent of the schools.

4. The general practices in the department are average for the Gulf Coast area schools.

A significant conclusion was drawn from these findings: "An evaluation of the program of health and physical education in each school should be made every year as the interviews with the instructors did not indicate that such an evaluation was made annually." (3, p. ix).

The school superintendents of Texas had as their 1955-56 project the development of Bulletin 4 (10) dealing with Health, Safety, and Physical Education. This is the fourth bulletin in a series designed to offer specific suggestions to school superintendents for improving instructional programs. The programs of health, safety, and physical education are defined and suggestions made in order to promote the best program possible for the schools. The bulletin is divided into the following sections:

Purposes of the School Health Program

What Makes a Health Program?

Purposes of School Safety Programs

What Makes a Safety Program?

Purposes of Physical Education

Components of Physical Education Programs

Suggestions for School Superintendents

Evaluating the Program

Bulletin 4 defines physical education: ". . . a way of education through motor activities and related experiences. The activities are selected as to content and directed as to outcomes." (10, p. 9).

In further description, four purposes of physical education are noted: first, develop and maintain physical fitness; second, develop useful physical skills; third, develop socially acceptable ways of behavior; and fourth, develop enjoyment of wholesome physical recreation (10, p. 9).

The components of physical education programs are divided into instruction, intramural sports, interscholastic sports, physical recreation, personnel, and facilities, equipment and supplies with the characteristics of each outlined completely. The term "instruction" as used in this bulletin, is the same as the use of the word "activity" as applied to the total program in this study.

The desirable features for this instruction phase of an adequate program include such items as size of classes; assignment of individuals to class of like grades; no substitution for physical education; instruction period for free play; program is adapted to needs and interests of the pupils; safety precautions encouraged; number of minutes per week required for elementary and secondary schools; evaluation of pupil achievement; a suitable costume designated for all participants; and evidence of unit and daily planning of instruction.

Summary

The problem of this study was to evaluate the activity phase of boys' physical education programs in selected junior high schools of Texas.

The significance of the study was indicated by showing the need for a means of evaluating the activity programs as a basis for improvement. The limitations of the study included those dealing with the sampling of schools and a specific area of the total physical education program.

The major procedures used in the study were outlined together with a review of related studies in this area.

In the succeeding chapter a brief background of the development of junior high schools will be presented and some past and present practices in physical education programs at this level. The scientific foundations of physical education

will be examined and documented. A discussion of some of the emerging concepts in the field will also be presented in Chapter II. Chapter III will present a description of the development and construction of the instrument and the pilot study. The selection of schools, the steps involved in the application of the scale, and presentation of results will be the content of Chapter IV. In Chapter V, a summary, recommendations, and conclusions based upon the data collected will be presented.

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CHAPTER II

FOUNDATIONS OF PHYSICAL EDUCATION PRINCIPLES

Development of the Junior High School

As a part of the task of documenting the principles upon which the junior high school physical education program should be based, a brief account of the development of the junior high school in America as well as what the curriculum offerings in physical education should be, will aid in understanding the scope of this study.

The junior high school was introduced into the American school system about 1910. Much of the philosophy and many of the recommendations in the development of the junior high school were the results of the work of various committees on educational reform (44, p. 34). There were two periods in the reorganization movement of secondary schools which began around 1890. In the first phase, the attention of educators was focused upon the need for improvement. Reports from the Committee of Ten (92), the Committee of Fifteen (91), and the Committee on College Entrance Requirements (93), were instrumental in pointing out the weaknesses in the intermediate grades and in the secondary schools.

An address in 1892 by President Charles W. Eliot of Harvard to the National Education Association resulted in a

series of committee investigations which assumed an important role in the reorganization movement in secondary education. These public pronouncements of Eliot's led to the appointment of the Committee of Ten on Secondary School Studies (92).

This committee, with President Eliot as chairman, was authorized to hold conferences with secondary school teachers to consider methods of instruction in subject areas, time allotment, and measurement of pupil achievement. It was not the purpose of this group to offer recommendations for the reorganization of the entire school system. However, as an outgrowth of their study, the appropriate place in the program for subject placement was given consideration. The report of the Committee of Ten exerted a tremendous influence on subsequent developments in the reorganization of upper elementary and secondary education. Various investigating committees during the two decades following the formation of Eliot's group were influenced by this report. Proposals offered by the Committee of Ten were reflected in the early programs of junior high school education (92).

As a basis of this report, one of the subcommittees of the Committee of Ten submitted seventeen questions to qualified persons in education throughout the country. Two of these questions had direct bearing upon the reorganization of upper-elementary and secondary education; one involved the question of whether the elementary school should have eight or six years and the second was concerned with whether or

not Latin should be taught at the elementary level (91). Respondents to the sub-committee's questionnaire expressed concern regarding the suggestion that the elementary school course be shortened to six years. The committee's report subsequently opposed revision of the 8-4 plan of organization. Even so, some contribution toward the reorganization of the upper-elementary and secondary education was recommended in closer articulation between the elementary and secondary schools. Another suggestion by this group was that certain secondary school subjects be begun earlier. Both of these recommendations point toward the thinking that is basic to the junior high school philosophy that developed a few years later (93).

The Department of Superintendence of the National Education Association in 1893 appointed a Committee of Fifteen to investigate the organization of school systems, the co-ordination of studies in grammar schools, and the professional preparation of the teachers. This committee was more directly concerned with problems of reorganization in the elementary and secondary education than was the Committee of Ten (92).

A committee was formed during the 1895 meeting of the National Education Association to consider the question of establishing better relations and understanding between the secondary schools and the colleges concerning admission requirements. The primary purpose of the committee was to

investigate the problem of college entrance requirements, but a discussion of reforms in upper-elementary and secondary education was inevitable. This committee made its report in 1899, in favor of a unified six-year high school course of study to begin at the seventh grade level. Although previous committees had suggested that secondary education should begin earlier, none had presented a definite plan for bringing about this change. The Committee on College Entrance Requirements was the first professional group to formulate a specific plan for reorganizing the established 8-4 plan. This group urged, as further reasons for a 6-6 plan that: (1) the seventh grade, as compared with the ninth grade, coincides more closely with changes in the growth of the child; (2) the transition from elementary to secondary education could be made more gradually; and (3) there would be greater retention of pupils in the upper-elementary grades and in high school. More than a decade later these arguments for reorganization were to play a prominent part in the junior high school movement (91).

After 1900, there was an emerging philosophy for the reorganization of schools and many educational practices were suggested that were later introduced into those schools (44, p. 40).

The second period of the reorganization movement of the American public school began with the establishment of the

first junior high schools about 1910 (44, p. 42). Due to its success in several areas, acceptance of the junior high school gained rapidly throughout the entire country. As early as 1912, thirty-one cities had introduced some form of junior high school organization. In 1918, the number of junior high schools had increased to 557, and by 1920 there were 883 (24, pp. 153-55). According to an Office of Education bulletin, there were 3,227 public junior high schools in 1951-1952 (133, p. 32). Another bulletin will not be published until 1957-1958, but the Office of Education estimated an increase of 500 schools over the 1951-1952 figure or a total of 3,727 public junior high schools in operation in 1956-1957 (100).

A rapid rate of increase in pupil population during the years from 1910 to 1930 in both elementary and secondary schools caused overcrowded conditions in many communities. Many of these school systems found a comparatively easy solution for this housing problem in establishing an intermediate school that would relieve both the elementary and the high schools (44, pp. 38-42).

There appear to be various factors that have had considerable influence on the acceptance of the junior high school in communities all over the United States. These factors include increasing enrollments, density of population, and regional influences. However, there is one factor that

has had a more profound effect than any of these. As Gruhn and Douglass point out:

. . . the desire of educators, parents, and other citizens for the educational program which would best meet the needs of the adolescent youth in America (44, p. 41).

This interest and desire on the part of those concerned with the operation of the public schools made possible the educational improvements that were apparent from the recommendations made by the Committee of Ten and the Committee of Fifteen.

Development of Physical Education

Physical education programs in the public schools of America have, through the years, been faced with many changes: new definitions of objectives, emergence of modern viewpoints, new areas of emphasis, and change in methods. A brief examination of this background is necessary to understand many of the present day problems in the field. Early influences of German, Swedish, and Danish gymnastics placed emphasis on exercises and muscular development. In 1850, an effort was made to devise a gymnastic program for the public schools and place it in the curriculum. However, it was not until 1890 that further efforts to revise the public school programs were instigated. Most of the revisions made during this time were either made in private schools or on the college level. During this decade, the adaption of foreign methods resulted in a formalized approach to "physical training." This decade

was also responsible for a sudden rise in the playground and school athletic movements. The latter addition was a duplicate of the college system. During 1900-1910 the development, organization, and supervision of school athletics started. Much criticism was heard at this time concerning the tendency toward the training of a few for the purpose of insuring victory in athletics between various schools (110, p. 272).

During the period 1910-1920 the teaching of health was considerably improved. A number of states passed compulsory physical education statutes. An effort also was made to develop athletic programs that would provide participation for more students. Jesse F. Williams attempted to show how physical education was in agreement with the educational theories of America. He believed that, in order to bring education into greater harmony with the biological laws and to better meet the basic needs of youth, it was necessary to eliminate "physical training" and formal gymnastics and to supply a richer program of natural activities (143, pp. 16-23).

Williams made the initial effort to provide a program composed of a wide variety of activities. This concept opposed the existing theory of a narrow offering which involved only gymnastics. Essentially, the Williams' suggestion included: first, fundamental movements, running, jumping, throwing, climbing, hanging, lifting, and carrying; second

play, games, sports, athletics, and aquatics; third, dancing and dramatic activities; fourth, self-testing activities, self-defense, stunts, combat; fifth, outdoor activities, hiking, fishing, hunting, and tracking; and sixth, individual gymnastics. A program based upon these suggestions would eliminate the formalized type of exercise and apparatus work because those activities are artificial and not natural. These activities do not give the individual a means of self-expression, and no social or moral training results from participation (143, pp. 243-48).

Tremendous progress was made after World War I in curriculum offerings. Probably the most important was the professional curriculum offered by universities and colleges, which provided better trained leadership in the field. At this time, 1920-1930, James E. Rogers noted the following main trends:

1. Programs were better organized; lesson plans and modern curriculum procedure were being used.
2. Programs were being graded with better selection, classification, and adaptations; activities were being placed at the proper age and grade level according to newest psychological, physiological, educational, and recreational values.
3. Programs were being adapted to individual needs based on health and physical examinations, physical fitness tests, and others; homogenous groups were being used in physical education as in other subjects.
4. Tests and measurements were being used for evaluating programs (114, pp. 47-48).

The program of physical education from 1930 to date includes considerable diversity in the activities offered at

all levels. Some of the more traditional activities are included as well as some of the newer recreational sports. Calisthenics, rhythmical movements, apparatus and tumbling, athletic contests, team games, swimming, life saving, mass games, dance, tennis, golf, handball, and others are all properly in the program. These activities offer the means to explore and reach the wide range of individual differences of interest found in every physical education class (135, p 500).

The more forward-looking educators agree that physical education and health education programs should occupy a leading position in the curricula of the elementary and secondary schools (110, pp. 224-43).

Gruhn and Douglass concur with the above statement when they express this viewpoint:

Although physical and health education is included in the curriculum of a considerable majority of the junior high schools, there are still too many schools which neglect this important area. Authorities on the subject generally agree that physical education and some instruction in health education should be required in all three junior high grades (44, p. 178).

Present day programs are placing more emphasis on physical fitness. Many schools, as an outgrowth of the recent war, have developed physical fitness tests in an effort to evaluate the ability of the youth within a particular school system. With a renewed interest in health and physical education, a number of states, Texas included, have been engaged in re-organizing their requirements in physical education.

Particular attention has been directed toward the physical fitness of youth, increased time allotment, and supplementing minimum essentials (23).

Gruhn and Douglass, in recent examination of courses of study in physical education for the junior high school, found emphasis in the following areas: first, conditioning and gymnastics; second, self-testing activities; third, tumbling and apparatus; fourth, team games; fifth, combatives; sixth, rhythms; seventh, mass and group games; and eighth, swimming (44, p. 180).

Numerous schools have a required program for all pupils and in addition offer a program of electives for pupils who have special abilities as well as for those who have physical handicaps. The development of wholesome social attitudes is being encouraged for noon hour and after school hours through co-educational activities (25, pp. 200-201).

The approach to physical education is eclectic. The formulation of principles aids in the solution of problems and available data are sought that will contribute to accepted educational procedures. Physical education attempts to prepare the student to meet specific needs in his life. The process of adaptive behavior indicates the functional aspects of physical education (26). The primary concern of this chapter is to examine the sources upon which the basic principles of physical education are formulated. Fundamentally,

the foundations for these principles are found in psychology, biology, and sociology.

Bases for Principles of Physical Education

For the sake of clarity, the use of the word psychology will be understood to mean the observation and interpretation of the human organisms to changing environment. The word biology shall be used to explain how human beings function; while sociology refers to the study of human beings living together in groups.

Physical education makes use of current data that help in the solution of its problems wherever data are available. A great deal is known about man, his culture, his behavior, and about human growth and development. This knowledge, if applied, would provide excellent programs of education and physical education (26).

Gutteridge (45) describes man's psychological capacities as tools of adjustment and indicates that the problems, presented by a complex culture with its demands, its unstable social values, its taboos and habits, place a strain upon all of the adaptive tools man possesses.

Psychology, as a science, studies the individual, his behavior, his reactions, and how he learns.

Munn (84) maintains that man is not a definite collection of primary instincts that may be numbered, catalogued, and exhaustively described one by one, but an individual

responding to the play of many forces upon him. It is important to be cognizant of the fact that environment differentiates individuals; the responses of all eight-year olds are not the same to an identical situation.

Through an understanding of psychology and with the application of its principles concerning how man learns, physical education is in a better position to help individuals to change.

In discussing learning, Murphy states:

Most learning springs from struggle. The motivated individual strives, blindly or intelligently, to find the means of satisfaction. As he strives, he discovers things and activities that bring him into contact with the source of satisfaction. These things and activities come to elicit, in their own right, part (or sometimes all) of the responses made to the satisfaction over itself (85, p. 192).

An individual lives as a whole and unified being, with neither his intellectual nor his biological powers dominant (83, p. 30). Therefore, physical education must understand the all of man.

Modern man is required by civilization to live in a social setting that requires that he use his biological and intellectual powers to advance his plans for society. He is not merely required to live biologically (98).

Oberteuffer avers:

Modern physical education is developed in response to man's needs. It is based upon the facts of man's nature. Those who teach it study man in his biological and social setting. They analyze the forces which are playing upon him physically,

psychologically, and socially, and construct a program in response to them. They aim to meet adverse forces with counter measures and to supplement the favorable forces so that man can achieve the fullest realization of his potentialities . . .

Any program of physical education may be judged, then, in terms of the success with which it meets the biological, psychological, and social needs of man (99, p. 31).

Present day concepts in physical education place emphasis upon education through the physical, which is based upon the biologic unity of mind and body.

As Bucher proposes:

The science of psychology plays an important part in the teaching of physical education activities. Physical Education is interested in learning the best ways to teach skills. Skills should be taught in the most efficient and economical way possible. Therefore, they should be taught according to the principles of psychology, which point out such things as laws of learning, the factors and conditions which promote learning, and the transfer of training (18, p. 212).

In suggesting a means of better programs in physical education, Oberteuffer asserts:

It is fairly certain that school programs have not achieved their fullest flower, are not conceived in their best light, and can move forward in the future to a greater contribution to the developmental education of the student. The key is to be found in the concept of integration (99, p. 63).

Every individual is endowed with parental genes, but these genes only partly determine the way in which he will use the organs and powers provided (1, pp. 2-3). Man is equipped by nature to live in an environment different from the life that modern culture forces upon him (143).

As Williams states:

The present understanding of nature rejects the notion that nature is always right or always wrong or half and half. It recognizes that the individual possesses drives, urges, and impulses to certain kinds of behavior and that these should be strengthened at times, weakened at times, and completely checked at times. Unless this is understood the nature of impulse may be improperly valued and the importance of wants and interests unduly praised.... These data are found, of course, in the biological and psychological foundations of human nature (143, pp. 128-9).

There are indications that the tendency and direction of evolution, stimulated by the force of the social inheritance, will produce a mental type of person, who, as time goes on, will have less and less need for muscles (21, p. 500). However, Williams (143, p. 131) maintains that, "Physical strength, endurance, power, will always be needed as a basis for the operation of the nervous system." While Bucher (18, p. 230) adds, "The change-over to an urban, indoor existence has been so rapid in his history that adaptation is far from being realized at the present time."

Through the physical education program, opportunities can be provided in childhood to satisfy these inner urges and to take care of the developmental needs of man on a physical basis (99, pp. 14-25).

Williams warns:

If the opportunity is denied, the results will be recorded increasingly in physical defects of development, lowered physical vitality, lessened power of observation and expression, stunted natures and stunted lives (143, p. 131).

Physical education can aid in the solution of this problem by providing motor activities that are similar in type and quality to the movements that have been used by mankind since early times, when his very existence demanded a more active life (16). Adults may not have had the opportunity in childhood for the development of motor skills, or as a result of economic problems, or other interests, did not acquire these skills. The effort to participate in games requiring such skills may result in discomfort or dissatisfaction.

Those motives that induce individuals to work together for a common end, aid in understanding, establish rights and duties, or give a feeling of group membership and unity, are referred to as social. The process of socialization involves individual members of society in learning the ways of the group, becoming functioning members, acting in accordance with its standards, accepting and following its rules, and becoming one of the group (38).

Socialization in childhood is fostered on the playground and continues as a process of learning throughout life. Physical education is an integral part of this procedure by which individuals become socialized (86). The term teamwork is applied to many life situations in which a self is developed and expressed in cooperative enterprise. As Cowell points out, "A football or basketball team represents a small social unit, and the game is based on a system of values or rules of conduct by which players guide their behavior" (26, p. 22).

Considerable effort has been expended to classify the biological features of man into satisfactory categories of anatomy and physiology, and to place sociological characteristics into such areas as anthropology, philosophy, and sociology. Between these two basic areas of sociology and biology is placed psychology, which attempts to explain reasoning and emotional functions operating within the organism. It appears to be true that a single principle may draw primarily from a particular science for its foundation, but most principles reflect the combination of these sciences in their application to physical education. With acceptance of the unity of man has come realization of the interrelationships between the above fields (16; 97; 143; 141; 51).

Cowell (26, p. x) defines principles as: . . . "fundamental truths which guide us to action in the solution of problems; they are judgments derived from facts." Scientific facts furnish the basis for numerous principles of physical education. With these sciences as foundations, correct principles may be derived for the technical aspects of the field (142). Principles are defined by Williams (143, p. 5) as: ". . . general concepts based either upon pertinent scientific facts or upon philosophic judgment that arises out of insight and/or experience."

This idea is expanded further by Williams (143), who indicates the bases for principles (1) in philosophy and (2) scientific facts. These two areas are subdivided with philosophy

formulated by insight, experience, and understanding; while scientific facts are based on many sciences, which for this purpose would include anatomy, physiology, psychology, biology, sociology and many others. If these data were widely known by laymen and better understood and practiced by physical educators, the misconception, that learning a motor skill is the extent of physical education, could be corrected.

Physical education for American youth must take into consideration the social scene in which these young people live and grow. Increases in automation bring a decrease in meeting the biological need for vigorous muscular activity. Additional knowledge of the learner and how he learns places emphasis on psychological practices in the conduct and planning of programs.

Principles should not only have scientific bases, but they should also be examined critically to determine their purpose. This purpose should coincide with the nature of man and with his social aims.

Education and physical education have become more closely identified due to important changes in purposes and modifications of programs. The first alteration of import in the progress of physical education was the elimination of calisthenics and formal drills as the complete program content. The second dealt with the provision of wise and responsible leadership and the increased effort to be associated and concerned with the total program of the school (143).

A thorough investigation of the literature revealed a lengthy list of publications having some kind of statement regarding principles of physical education (110; 16; 97; 143; 141; 52; 96; 86; 119; 59; 118; 72; 23; 113; 50; 56). From these statements a composite of ten principles was constructed. This listing represents the ideas most often expressed in the pertinent literature. The following ten principles are the main headings of the evaluative instrument constructed as half of the dual purpose of this study.

The Ten Principles of Physical Education

One. The physical education program should offer a wide variety of activities with opportunities to acquire a number of motor skills.

Two. The physical education program should be considered an integral part of the total educational effort of the school.

Three. The physical education program should serve all pupils, giving adequate opportunity to those who need physical education most.

Four. The physical education program should be conceived and conducted with an awareness of the unitary nature of man.

Five. There should be a course of study in physical education that is educationally sound, based upon the interests, needs, purposes, and capacities of the youth it serves.

Six. The physical education program should be designed to combat sedentary living and promote physical fitness.

Seven. The physical education program should develop physical education possibilities by encouraging wise use of leisure time and by supplementing community facilities for joint recreational purposes.

Eight. Physical education program continuity should be provided in order to create the best possible teaching-learning situation.

Nine. The physical education program and staff should have adequate administrative support.

Ten. The physical education program should provide basic instruction for all students.

Each one of these items will be documented by reliable sources of data from the fields of psychology, biology, and sociology.

These ten principles were derived from the philosophy of physical education as stated by recognized leaders in the field. These principles, then, represent an aggregate of their views and are expressed in terms of the contribution to the welfare of each individual student and indicate the application of a philosophy of education as applied to physical education. Each principle is descriptive of certain desirable practices in physical education based upon the accepted theories of qualified persons in the field.

PRINCIPLE ONE: THE PHYSICAL EDUCATION PROGRAM SHOULD OFFER A WIDE VARIETY OF ACTIVITIES WITH OPPORTUNITIES TO ACQUIRE A NUMBER OF MOTOR SKILLS.

Psychological Foundation

Physical education is a phase of the broad field of education. Through participation in its activities the individual finds satisfactions, skills, health, good posture, strength, social adjustments, and much other associated learning.

Williams says:

It is important to eliminate from the program all purely muscle-centered activities in favor of a program of functional activities, as illustrated by sports, games, dance, tumbling, self-testing sports, and similar natural movements, individualized where necessary and possible. The program should be taught with the purpose of utilizing the rich potential of such activities for the development of desirable social skills and wholesome interests as well as organic power (143, p. 243).

Lee and Wagner, in describing a good physical education program, state:

. . . it covers a wide range of activities, not only to meet the needs of varying types of pupils but also to meet the varying needs of each individual child. For its share in the development of proper emotional reactions, group consciousness, and a sense of personal responsibility within the child, physical education should offer a well-rounded curriculum of sports, games, aquatics, and rhythmic activities . . . (73, p. 44).

Oberteuffer concurs:

Programs at all levels should be so varied as to provide every student with an opportunity for self-realization. Not everyone likes basketball; not every boy can play football. Swimming does not appeal universally. Physical education cannot be content to allow its students to achieve success and satisfaction vicariously, by watching others enjoy themselves.

. . . the obligation of physical education, like the obligation of all education, is to individualize the program as much as is humanly possible so as to give a wide opportunity for all to realize their own strengths through success, in some form of motor expression (98, p. 27).

The young adolescent approaching maturity should have many opportunities to participate in a wide variety of activities that will prepare him to meet all kinds of situations with confidence. Team sports have a strong appeal to boys of junior high school age and are excellent ways to contribute to making the necessary adjustments in everyday life (52; 113).

Psychologists recognize the constant need of every individual to express aggressive tendencies. Participation in a number of competitive games will provide a wholesome means of expression for these kinds of feelings. If individuals cannot satisfy their needs by one method, they must turn to other techniques that will. Games of all kinds afford the participants an opportunity to maintain self-esteem by defeating worthy opponents (121, p. 72). In an effort to provide socially desirable means for the expression of aggressive feelings in all individuals, physical education should offer a wide selection of activities.

The modern school increasingly places emphasis upon creative expression. Education in and for democratic living needs to provide learning situations that will develop people who will contribute to the culture rather than merely inculcate

the culture. In the formation of personality and meanings, attitudes and appreciations are enhanced through efforts of creative expression (19, pp. 484-95). In support of this idea Burton further states: "Creative self-expression is a normal characteristic of desirable living. The person whose response is original, inventive, and typical is extremely important socially. Progress takes place through constructive variations from the accepted and the routine" (19, p. 485).

The individual contributions of a creative nature by average persons may not be of the highest order, but they have considerable value in the growth and development of the individual himself. Physical education contributes to this self-realization of the person by providing a program that includes a large number of activities that offer many opportunities for each one to seek and find his own means of creative expression. Children should have opportunities to play new games, to try new stunts, or to make new arrangements for old games. With the presentation of many play situations, a number of children within the group will have chances to develop leadership potentialities. The repetitious nature of life can be a deadening effect upon individual personality development. To have only football in the fall, basketball during the inclement weather, and softball in the spring, is not a program of sufficient variety to provide creative expression for as many students as possible (69). As Oberteuffer

states: "To express oneself in response to either mood or music, to place an idea in a motor pattern or in rhythm, or to reflect a feeling for something in movement is one of the principle avenues physical education has for developing creative self-expression" (99, pp. 135-6).

Biological Foundation

Principle One is concerned with offering a program that provides a wide variety of activities with opportunities for individuals to acquire a number of motor skills. It has been established by Murphy (85, p. 490), that man is an integrated organism in which parts are related to the total. This process of integration enables the parts to function smoothly together as a whole. Efforts to document the principles in relation to the various aspects of human beings into a strict biological, psychological, or sociological structure become futile. This may be done for purposes of convenience or for clarification, but it must be realized that the inter-relationships between the sciences, in attempting to understand the individual, over-lap considerably (79, p. 24).

The biological nature of children determines that they should be active and that they should engage in the many and varied movements called play (85, p. 110). This biological need for movement remains with man, although many of the economic reasons for exertion have been eliminated. Cowell explains biological need as: "Those more or less universal

tensions which have their origin within the organism such as hunger for food, activity, sex, sleep, and the like" (26, p. 62).

The offering of a wide variety of activities has biological foundation in that a normal child needs from two to six hours of vigorous activity each day (119; 97, p. 57). Since it is not practical to devote this amount of time during the school day to meet this need, physical education should provide instruction in many games and sports that can be played in after school hours. When given the opportunity to acquire fundamental skills in a wide range of activities, an individual is more apt to find several interesting games for leisure time pursuit.

With the increase in size and strength of muscles at this age level, a greater interest in outdoor activities is also found. Junior high school boys are approaching maximum capacity to learn motor skills (18, p. 192). Sound physical education experiences will provide large muscle activity that is essential for the proper growth and development of normal junior high school boys. There should be a number of games involving natural play included in the course of study. These natural play activities are based essentially on movements man has used for centuries in self-preservation. Primitive man was confronted with many circumstances in which he found it necessary to run, jump, strike, throw, chase, pounce upon, climb, and dodge, in order to provide food, secure shelter, and preserve life.

Life conditions of the present time offer few chances for the expression of these powerful inner drives except through the physical education offerings. Each of these play activities is found in the games boys find popular today. The popularity of football may be traced to the fact that practically all of these primitive urges are involved. Expression through these movements is satisfying because each participant is prepared in his nervous system to respond in the required manner. The utilization of these inner drives should not be overlooked in the establishment of the program (136, p. 77).

Sociological Foundation

Principle One maintains that the physical education program should offer a wide variety of activities and provide opportunities for students to acquire a number of motor skills. Physical abilities are important in the social adjustment of boys. The prestige value of skill in competitive circumstances can be fostered through the physical education experience only when the program includes a number of accepted games and sports. An important component of leadership for boys is the motor ability exhibited in various types of muscular activity (12; 48; 93; 105, p. 131; 130; 110).

In a study by Bower (12, p. 86), it was found that popularity in the junior high school age group was related specifically to strength and physical ability. The possibility

of attaining peer status exists to a greater degree in a course offering of wide range which provides more individuals an increasing number of opportunities to exhibit the various motor skills involved in a number of activities. However, the physical education teacher must aid the individual child in adjusting to the frame of reference in which he finds himself and extend means by which the unskilled child may find some measure of peer acceptance. In its continuing effort to contribute to the broad area of education, physical education must not create the impression that all is to be attributed to physical prowess with the resultant neglect of many useful ways of attaining peer acceptance (93, p. 119).

In support of the statement that physical education is a social experience, Nixon and Cozens say:

. . . it should employ in its program as far as possible play activities which are socially significant and which give the individual opportunity to act as a member of the group. And in view of the fact that the social learning in group activities may be either good or bad, physical education should provide skilled and intelligent leadership which will insure the development of qualities and characteristics conducive to a better social order (96, p. 94).

The most important factor in the development of personality is the presence of other personalities. The organization of learning experiences are changed frequently by the teacher in order to place individuals in different social climates that bring about significant changes in personality characterized in self concepts, social attitudes and emotional

responses (79; 38; 101). Social unity is essential in democratic living. Cooperation is necessary for group living. Play activities abound with opportunities for cooperation. Usually, individuals have no desire to play alone and since the play is done in company with others, rules of the game are needed and must be observed. This is an example of cooperation. Play has many possibilities for developing desirable social traits and the physical education experience must be broadened to reach as many students as possible (112).

Through physical activities contributions can be made to achieving social progress. Education plays an important role in social training. Physical education, as a part of the total educational process, can contribute to this goal by providing a program composed of a wide variety of games and sports (11).

PRINCIPLE TWO: THE PHYSICAL EDUCATION PROGRAM SHOULD BE CONSIDERED AN INTEGRAL PART OF THE TOTAL EDUCATIONAL EFFORT OF THE SCHOOL.

Psychological Foundation

Principle Two maintains that the physical education program should be considered as an integral part of the total educational effort of the school.

The physical education program is a part of the total educational experience of a child. Scott's definition of physical education substantiates this idea: " . . . that phase

of general education which provides opportunities for all students to acquire the maximum physiological, psychological and social development of which they are capable through participation in properly selected and controlled motor activities" (119, p. 154).

Physical education is more closely identified with education at the present time because of two important modifications: first, its purposes were changed and formal drill and mass exercise were modified; second, provision for wise leadership and interest in and contribution to the total program of the school. These modifications came about through an understanding that physical education had a definite contribution to make to the education of the individual (143, pp. 17-23). As Williams points out:

That contribution arises out of four possible developments: 1. Development of organic systems, 2. Development of neuromuscular skills, 3. Development of interest in play and recreation, and 4. Development of standard ways of behavior (143, p. 23).

For purposes of explanation, numbers 2 and 4 above will be discussed in this section while number 1 will be dealt with in the biological section, and number 3 will be discussed under sociology.

The junior high school boy is probably near the height of his motor educability. Since much of his acceptance and recognition depends upon motor skill, he should be taught the skills involved in the many activities included in the program

and not be allowed to play in order to occupy his time and use up the allotted period (93; 62). Educational practice based on the acceptance of this unity of man would not place academic learning on a high level and relegate motor learning to an inferior position. Motor activities are important means for learning. If it is accepted that all learning takes place through the body, then all education is body education. Skills taught in the instructional phase of the program must be functional; only those skills that are functional contribute to the education of the individual. Functional skills such as walking, running, climbing, or lifting, are utilitarian; recreational skills that involve numerous activities and coordinations are found in games, sports, dance or athletics (55; 77). Coordinating these statements on motor learning, Rugg observes:

The physically educated individual is one who has mastered the dynamics of body control and is thus enabled to express himself through movement. This mastery of the body not only aids him in participating in pleasurable physical activities but also enables him to accomplish with grace, poise, and economy of energy most of the necessary activities associated with normal, workday living He responds not only to the particular act which he is performing but also to a wide variety of factors in the total situation (115, p. 215).

Hartman says:

Educational psychology cannot neglect the body, for the elementary reason that that is all the human body has and is. In this sense physical education (or education through the physical) is the only kind that takes place or can possibly occur (51, pp. 45-46).

Behavior is learned and teachers are responsible for the creation of fertile learning situations (85, pp. 616-710). Physical education can contribute considerably to socially acceptable behavior because the youngsters care very much about the activities and experiences involved while participating. It is this responsibility for the guidance of students that is an important aspect of the process of education. The teacher-pupil relationship should be a close and understanding one in order to influence behavior properly. The intended outcome of this behavior influence on the part of teachers is the gradual, but full, assumption by the student of self-discipline. Pupils do not learn responsibility for conduct when they have no opportunities to make choices or when someone forces them into a predetermined pattern.

Individuals learn self direction by being treated as honest, sincere persons who will cooperate when given the chance to exercise self-control (19; 41).

Teaching should be conducted in a way that will enable students to adjust to failure and to understand how to convert failure toward success. A young person gains confidence in his efforts to learn if he experiences success. Each person must have a positive balance between success and failure. Failure should be explained and the child guided toward improving his efforts through thoughtful consideration of the reasons contributing to his failure (134, pp. 937-42).

This explanation by the teacher will enable the child to attain a higher degree of intelligent behavior in future situations. In this connection, Hopkins states:

Success is far more integrating to any individual than failure. Failure can become integrating only when he (the learner) is capable of reinterpreting it in a positive way toward success. Under no circumstances should the act be made easy in order to eliminate or lessen failure (57, p. 188).

Biological Foundation

Principle Two states that the physical education program should be considered an integral part of the total educational effort.

Biologically, the support of this principle is primarily based upon the development of organic vigor in the individual. The organic systems of man are composed of the vital organs and their associated structures. These systems are the nervous, skeletal, endocrine, excretory, circulatory, reproductive, digestive, and respiratory systems. The development of these systems to their greatest functional levels is dependent upon physical exertion that strenuously employs the larger muscles. In this respect, physical education makes an important contribution to the broad field of education in developing, maintaining, and improving the vigor and vitality of the individual, which enables him to perform the necessary tasks demanded of him. A high degree of organic vigor is necessary for a person to be in a state of readiness to learn. Since there is no such

thing as a physical activity apart from a thinking and feeling activity, neither is possible without its counterpart. The concept of the unitary nature of man eliminates the absolute separation of physical and mental activities (87, p. 93).

As Schneider points out:

Frequently repeated exercises, extending over months and years, bring about many striking alterations in the structure and functions of organs of the body (118, p. 255).

Steinhous adds:

The strength, speed, and power which give to an athlete the thrill of body control and even victory can add just as much to the joy of effective living in the office, factory, and field (123, pp. 391-95).

In an effort to contribute to the broad aspects of education, physical education must somehow help students realize that practice of physical fitness is not only conducted on the play field or gymnasium under the watchful eye of the teacher, but must be carried on by themselves in their out-of-school life as well.

Sociological Foundation

That the physical education program should be considered an integral part of the total educational effort of the school is stated in Principle Two.

Sociologically, physical education meets the objectives of general education by the awakening, and keeping alive, of an interest in wholesome play and recreation. The social aspects of this area of education are measurable in terms of

group and individual behaviors as well as in organic development. To operate in the democratic way is a developed talent; opinions are expressed, thoughts are spoken, ideas are tested against ideas, agreements are reached, and progress is made. Socialization is an important phase of education, and physical education offers the kind of play experiences that contribute to that socialization (27, p. 147). Understanding of, and sympathy for, others is readily brought about under wise guidance through the competitive situations inherent in play activities. With the possible exception of music, athletics, which is an integral part of physical education, have contributed more toward the recognition and acceptance of individual performance regardless of race, creed, or color than any other aspect of modern civilization.

Wholesome play and recreation begin in the simple games of children and advance through more complex activities of adolescence and blossom into the leisure time activities of adulthood. Through these many motor experiences, ways of behaving in a socially accepted manner are learned. The individual must conform to the rules and regulations of the game. The decisions rendered by the group must be accepted by each player, however contrary they may be to his self concept of being a hero. Group living is a combined reaction of individuals who are accustomed to reacting for the common good. As Oberteuffer says:

Education for democratic living need not be left entirely to "courses" in democracy or political science or "civics." Such a view would all too narrowly restrict attention to a limited phase of school and college life and would overlook the evident fact that actually students are learning about living, whether it is democratic or not, in every phase of the day's experience. They learn of democracy and its meanings everywhere they go, whether it is in the classroom, the cafeteria, the locker room, or the basketball floor (99, p. 210).

Physical education is a laboratory for dealing with social behaviors and a means for serving the broad purposes of education. Situations in play provide numerous opportunities for social growth.

In particular, an opportunity for social growth through physical education occurs in the many adjustments necessary to comply with the rules and regulations of the different game situations. Each person should develop respect for properly appointed authority. The acceptance of this respect is fostered in the play of children in all games or sports from the simplest form of "taking turns," to more complex examples involving close decisions and interpretations of written rules of performance. These should be learning experiences and not domination of the individual to unrelenting authority. By placing students in the role of referee the understanding of authority and its functions can be more clearly grasped. Through these contacts it is possible to recognize leadership roles, and intelligent behavior is promoted. Hopkins in discussing the importance of social authority says:

Social authority, which means standards of behavior, moral codes, religious precepts, laws, and customs which condition his purposes and values, the attitude of others toward him, and may even impinge upon his own desire for individual freedom (57, p. 187).

The role of physical education in the educational process can be clearly illustrated by examination of the four headings that the Educational Policies Commission (35, p. 18) lists as being objectives toward which education is striving.

These are:

- (1) the objectives of self-realization, which are concerned with developing the individual to his fullest capacity in respect to such things as health, recreation, and philosophy of life.
- (2) the objectives of human relationship, which refer to relationships among people on the family, group, and society levels.
- (3) the objectives of economic efficiency, which are interested in the individual as a producer, a consumer, and an investor.
- (4) the objectives of civic responsibility, which stress the individual's relationship to his local, state, and national and international forms of government.

Physical education, as a phase of the total educational effort, contributes to each of these objectives.

PRINCIPLE THREE: THE PROGRAM SHOULD SERVE ALL PUPILS GIVING ADEQUATE OPPORTUNITY TO THOSE WHO NEED PHYSICAL EDUCATION MOST.

Psychological Foundation

For the student who has many special abilities in motor activities, the school, through a well organized athletic program, offers many opportunities to display these skills.

The activity program and interscholastic athletics are branches of the same field. They are parallel in their purposes and both can be justified only in terms of their contributions to the total educational endeavor. Frequently the students who have little or no ability in motor activities are ignored or are given a loosely supervised recreational period to acquire and improve motor skills without benefit of qualified correction (119).

The physical education teacher should provide proper opportunities to develop abilities of students instead of devoting the entire period to discovering what abilities exist.

In a platform of principles of physical education, Streit and McNeely state:

For every person there should be opportunity to gain the values of physical education by taking part in activities selected according to his interests and according to his needs, as shown by a medical examination and in other ways (127, pp. 136-37).

Educators are becoming more aware of the importance of play in the lives of children. The child takes his play seriously and play involves adjustments to life problems. Through play the child learns to get along with other people, to solve intellectual problems, and to solve mechanical problems. This idea from Morgan indicates efforts to understand the theory of play:

The study of play makes very clear the fact that play cannot be described in terms of what the individual is doing or how he is doing it. Play

must be described solely in terms of the attitude which the child has toward his activities. When he is doing something because he wants to do it, his activity is play; when he is doing it with a feeling of dislike and feels that he is forced to do it, the activity is no longer play (83, p. 446).

Play situations should be observed by the teacher with an effort to discover why a particular child is acting the way he is.

In a nation of sports-minded citizens there should be equal emphasis on the less spectacular forms of competitive sports with provision for participation for all (90). Every individual is not able to participate in the athletic program, so there is a place for experiences in competitive games that could be offered in the physical education program. As an outgrowth of the instructional phase of the activity program, the intramural sports offer participation in organized competition against opponents of similar levels of skill.

As Cowell and Hazelton point out:

Facts and skills are not important because of their inherent value but because they contribute to the total development of boys and girls. We are interested in what John does to football or what Mary does in the dance but we are more interested in what the football does to John and what the dance does to Mary (25, p. 13).

Biological Foundation

The physical education program should serve all pupils, giving adequate opportunity to those who need physical education most.

The biological foundations for this principle appear to be limited, but extremely important. It is concerned with a thorough medical examination for all students, as one of the main bases for the selection of physical activities. This practice, though not widely employed, is sanctioned by the American Medical Association and the Association for Health, Physical Education and Recreation (127, pp. 136-42).

As Scott states:

Students who are free from handicapping physical defects, as determined by the health examination, should be permitted to participate without restriction in any kind of physical capacity of the individual. These students should be assigned to the program of physical education for normal students. The primary concern of this program is to take the student from where he is at the time of entrance and help him become a more skillful, more vigorous, and a better social being than when he started in the program (119, p. 191).

Physical education is not track, basketball, tennis, football, or dance--it is the education of individuals through expressive movement, and use of such experiences as educative tools (23, p. 153). Movement becomes the subject matter of physical education. The body is a symbol of the self and as such becomes the means for living and learning.

This idea was expressed by Rugg (115) as the body being the basic instrument of human education; Alexander (3) mentions the use of the self; Lewin (76) maintains that the child thinks with his whole body; and Dewey's famous "learn by doing" implies the same thing. Perhaps it is important to emphasize the wisdom in providing a physical education program designed

to serve all pupils and not to concentrate on a chosen few in view of the many opportunities for the expression and development of self.

Sociological Foundation

Principle Three contains the idea that the physical education program should serve all pupils by giving adequate opportunity to those who need physical education most.

The cultural pattern, which places a premium upon sports and enhances the prestige of the outstanding athlete, also fosters the desire of boys to seek continuing improvement of motor skills. A study by Espenschade (37) shows that boys' interest in, and development of, skills in motor activities increases consistently throughout adolescence, but there are wide variations of physical maturation within any group this age, with attendant deviations in skills. Many students at this age level find themselves "left out" not only because of physical immaturity and lack of skill but also because of many physical defects. If the premium placed on motor skills is too high and little if any provision is made for supplying activities that serve all pupils, a number may fail to gain the recognition needed or may have feelings of inferiority because they cannot gain the attention necessary for social contacts (14). As a result of this practice, a social handicap may also be added to a motor handicap. This does not mean that every individual must be an "athlete" in order to achieve

normal social relations with his peers. Some of those who are lacking in motor ability may gain acceptance and satisfactory social relations through other talents (41). However, a program that provides for all pupils in its planning will make it possible for more individuals to find personal satisfactions that may accrue from the activity program.

Practice experiences are necessary in learning to throw a ball, just as opportunities are needed to learn and acquire the many techniques involved in social adjustments. Deficiency in specific skills may hinder a child's social development and block an adult's social activities, while acquisition of special skills have a constructive effect. Jack (60, pp. 69-73) found that children who had received practice in certain motor skills developed competence in expressing themselves more freely, were more self-assertive, and less submissive than before. While Updegraff and Keister (134, pp. 937-42) maintain that children who had received instruction that helped them learn how to help themselves were less likely to exhibit immaturity responses such as crying, asking for help, or showing temper. It is not logical to assume that the acquisition of skill alone can relieve deep-rooted emotional difficulties that may retard social adjustment, nevertheless measures which are most likely to be effective in social behavior have a tendency to aid in adjustment if the

techniques are practical. While these studies investigate the acquisition of motor skills, the situations involved were not specifically game and sport experiences. Many of the results can be applied to program planning in physical education.

Competition, and the degree to which it is fostered by the school and activities within the school, have caused much discussion in educational circles. A person will sometimes try to compete against himself, as in the case of self-testing stunts such as jumping, speed in running, or accuracy in throwing. There are a number of circumstances in which the persons cooperate with others during competition, such as making the best poster in group work, or in the many team games, for example, softball and soccer. The attitude toward competition on the part of teacher and student must be educationally sound. Gates, Jersild, et al. contend:

The practical attitude, rather, should be to turn competitive impulses into the most constructive channels; to avoid emphasis on ulterior or artificial rewards; to provide each individual as far as possible with opportunities that are commensurate with his abilities; to provide opportunities for children with differing types and degrees of ability to have a taste of achievement; to prevent inequalities in the rewards for useful service; and to avoid a policy of continually placing children in competitive situations in which they are bound to fail (41, p. 152).

If the physical education program followed these suggestions many of the competitive experiences inherent in games could be educational, instead of emotional disturbances of doubtful value.

PRINCIPLE FOUR: THE PROGRAM SHOULD BE CONCEIVED AND CONDUCTED WITH AN AWARENESS OF THE UNITARY NATURE OF MAN.

Psychological Foundation

Fortunately many modern teachers have accepted the concept of the unitary nature of man, although in practice physical education has been nothing more than a perspiration-producing period (116, p. 45). Physical education is not merely education of the physical but becomes education through the physical, since these experiences involve intellectual, emotional, social, and physical aspects. For best results physical education should consider its influence upon the whole individual and not only the effect on isolated segments.

The old idea that mind inhabited body and that the two existed independently of each other is not presently accepted by psychologists (116, pp. 210-23; 138, pp. 69-73).

Snygg and Combs suggest:

We might state this body-mind explanation of behavior as follows: Two individuals, in the same environment, behave differently because they have different minds. The same individual, in the same situation, behaves differently because he has "changed his mind." Seen in this setting, the mind was a very satisfactory explanation for individual variations in behavior. It is not surprising, therefore, that even after psychologists have been forced to abandon it as a causal concept, it is still firmly entrenched in popular thinking. . . . After almost three centuries of study the mind remains an explanatory concept only, completely useless for the study of individual behavior (121, pp. 342-3).

In its contribution to the total development of students, the principle of integration must be accepted and employed. The integration of the personality does not occur automatically from all experiences, nor are these situations free from forces causing disintegration. Williams expresses this idea as "Physical education should accept the principle of integration and should use its services to prevent, in so far as possible, disintegration of the person" (143, p. 169). Hopkins explains integration as "a word used to designate intelligent behavior" (57, p. 19).

He expands this definition, saying:

This means that he becomes increasingly intelligent in his interaction with his situation, resulting in increased integration within himself and with his environment. Since this condition is exhibited in his behavior, integration is a name for the process of intelligent interacting Since the individual interacts to maintain what integration he has and to improve his integrating in subsequent situations, the personality and character developed are dependent upon his success in this primary function. To aid children to make their behavior increasingly intelligent by acting more and more upon better and better thinking is the educational implication (57, pp. 19-20).

If teachers would remember that they are always dealing with the pupil as a person and are not "using" just a segment of him at a time, the learning situation would become a richer experience. Psychology explains learning as integration, it is a process of building up and of putting parts together in new relations to form new wholes.

In this connection, Gates and Jersild suggest:

Educational procedures should stimulate and facilitate one's ability to systematize, to integrate or unify the multitude of things which call for problem solving are the ones which are most likely to evoke the continuous utilization and progressive reorganization of previous learnings (41, p. 329).

Many new and varied areas can be brought into the teaching of physical education if the concept of integration is applied. If an effort is made to decide just what the physical education of an individual really includes, it is discovered that more goes on in the brain of the learner when learning a motor skill than the exercise of neuro-muscular patterns to acquire that skill (99, p. 103). In learning badminton, there are many more things involved in the learning situation than the skills involved. The rules and regulations must be learned in order to "play the game." The pupil also discovers materials used in the racquet, cost of equipment, etiquette in calling faults against himself, and many other associated learnings (41, pp. 325-41). All persons must be educated for a lifetime of activity in order to become active participants throughout life, and to become intelligent spectators. Thus, the class period should not be devoted only to the teaching of skills. There can be found much information, many sources for discussions, questions and problems to be investigated, and references to be consulted, all of which supply materials for instruction during the class period (98, pp. 304-306).

Bovard referred to these sources as underlying motives (13, p. 356). Oberteuffer discusses these same areas and has called them learnings associated with motor activities.

He states:

If we stop at any incomplete conception of physical education, we will lose a great opportunity to make a more constructive contribution to a growing child. He will have only skills without meaning, performance without understanding; he will be limited largely to the activities in which he will have some skill . . . "exercise" atmosphere, and approach a little closer to other laboratory experiences where people perform an activity and then discuss its meaning and its place in life. By so doing, physical education will become less and less of an isolated experience and will more and more absorb the coloration of an integrated contribution to human development (99, pp. 304-11).

There are five divisions made by Oberteuffer of the associated learnings: first, consumer interests; second, appreciations of sport and dance; third, social behaviors and development; fourth, relationships to health; and fifth, contemporary status (99, pp. 307-11).

In an effort to meet the integrative ideal, physical educators should realize that what the individual is learning from his activities, about human relationships, is valuable. Everything included in the program becomes a medium for total development. There are significant outcomes concerning social skills just as there are from winning victories and developing strength. Life is lived as a whole and physical education must contribute to all of it. When someone improves his

tennis stroke to the degree that it approximates good form, integration is taking place.

Biological Foundation

Principle Four involves the concept that the physical education program should be conducted with an awareness of the unitary nature of man.

The biological concept found in present day acceptance acknowledges an integration of all the characteristics, capabilities, skills, and powers of an individual into one personality, which responds as a whole (138, pp. 402-404). The endocrine system and the nervous system of an individual are not only integrated within themselves, but the entire organism functions as a whole. Each individual functions as a whole. Each person is a unit, composed of many parts, all operating as a whole. Each one is born an organism that will be influenced throughout life by certain tendencies of native endowment. An individual inherits a tendency or potentiality of development to a certain degree under normal conditions. While favorable environment will aid in this development, the limits of potentiality can never be exceeded (57, p. 88).

Concerning the biological fact that all men are born unequal, Hopkins says:

From the biological facts, training develops abilities in the young that are not already possible in the inheritance; it cannot exceed the ambition to develop certain of the inherent qualities and to suppress others (57, p. 87). . . .

Only as we understand the biological basis of human behavior can we promote the type of education which makes for maximum integration of the individual within himself and with his environment (57, p. 105).

Extensive information is found in the literature discussing the unified nature of man and the necessity of recognizing this concept in education. In addition to those sources previously cited, Witmer and Kotinsky explain man's unitary nature in what seems to express a consensus.

Witmer and Kotinsky point out:

The "whole person" has seldom been conceived as a true whole. Far more frequently he has been conceived as the sum of a number of parts or aspects; the physical, plus the emotional, plus the social, plus the intellectual, plus the spiritual. Sometimes intellectual status has been seen as a resultant of the forces exerted by the other "parts of the personality"; it was observed that the child's capacity to learn was crippled if he was physically under par, emotionally disturbed, short on the kind of social experience that would provide intellectual stimulation. The parts remained, though to a degree mutually independent. This fractional wholeness is probably attributed in some degree to the fact that the child is studied by a number of disciplines--medicine, psychology, sociology, and the like--each one of which sectors out a cluster of phenomena that are amenable to analysis by its particular measure and methods of study. Then the various findings have to be fitted together again to make the whole child, and so the whole has come to mean the sum of the parts, frequently in interaction. The parts are thus abstractions rather than realities, more the creations of available tools of study than meaningfully separate parts (145, p. 248).

This statement indicates the necessity for recognizing the human organism as being interdependent, interconnected, and integrated, so that whatever happens to one part, causes corresponding changes in other parts.

The following list by Hopkins indicates the biological needs of every organism that must be satisfied if it is to develop into normal adulthood.

1. The individual needs an adequate amount of sleep, rest, and relaxation.
2. The individual needs a satisfying amount of food, shelter, and clothing.
3. The individual needs opportunity for rich and varied experiences.
4. Every individual needs an opportunity for the selection and pursuit of his own purposeful activity.
5. Every individual needs an opportunity for normal sex life, culminating in marriage and a family (57, pp. 181-83).

Physical education as a part of the total educational experience is expected to make its contribution to human development. As far as capacity is concerned it is not possible for the measures to be partial; increased strength, vigorous sports only, or social acceptance are all important aspects of the total program. However, if these measures are considered separately they do not represent appraisal of the whole person. It is the educational function of physical education to contribute in its way to the biological needs of the person as mentioned by Hopkins (57, p. 182).

Here, as in the effort to separate completely the science sources for education in general and physical education in particular, there is considerable overlapping and interrelationship between the various principles herein presented. Oberteuffer provides several ideas concerning the unitary nature of man and how it can be served through physical education. These suggestions, in turn, indicate means of satisfying the biological needs.

Oberteuffer states:

. . . physical education has the major responsibility of keeping the development of the physical aspects of life as well emphasized as the intellectual and the social.

How an individual lives is far more significant than how much he weighs. The program will seek health, to be sure, but it will realize that health, properly defined, is the condition of the organism which measures the degree to which its aggregate powers are able to function.

The integrative ideal searches for continuous, unbroken, unsegmented growth and development. Marbles and hockey become mediums for total development. Social skills are as significant outcomes of football as are victories, or strength. There are no dualisms--no mind-body values. Life is lived as a whole and physical education must contribute to all of it. If it is a democratic culture we live in, physical education must contribute to it by teaching respect for personality and freedom of opportunity within its activities (99, pp. 46-48).

A summary of the meaning of man's unity is given by Williams. He states:

Modern physical education with its emphasis upon education through the physical is based upon the biologic unity of mind and body. This view sees life as a totality. Correct in their appraisal that the cult of muscle is ludicrous, those who worship at the altar of mental development too frequently neglect the implications of unity. "Socrates with a headache" is always preferable to a brainless Hercules, but the modern spirit in physical education seeks the education of man through physical activities as one aspect of the social effort for human enlightenment. It is the plain truth of the matter that no individual, no community, no nation can depend upon one aspect of life for the whole of living. Deification of only the physical, or the mental, or the spiritual leads to disaster (141, pp. 279-82).

Sociological Foundation

The physical education program should be conceived and conducted with an awareness of the unitary nature of man.

In addition to understanding students from a psychological and biological viewpoint of integration, teachers must also understand the circumstances that act upon individuals--integration in its sociological aspects. If education is a social process of change in the behavior of the human organism, then physical education becomes the social process of change that comes from experiences in the social situations involved in play activities (101, pp. 25-29). The most important factor in social development is the presence of other individuals.

The concept of integration in the context of sociology is utilized in three different ways.

Mander points out;

- a. To designate the desired relationship between an individual and other individuals as interacting personalities.
- b. To designate the desired relationship between an individual and the organized institutions of society.
- c. To designate the desired relationship between one organized institution of society (the school, for example), and other institutions involved in the complete culture (77, pp. 21-22).

In considering these three approaches, the educational institution is faced with the task of teaching and operating in such a way as to insure the learner's becoming an integrated personality functioning creatively in an integrated society.

It has finally been realized that desirable social and moral qualities cannot be successfully inculcated in the young by formal instruction (2). Those who are familiar with the psychology of the learning process know that human beings learn to behave or live better by acquiring, through their own activities, ways of responding desirably to social situations than if they were told to behave or live (72, pp. 211-41).

According to Hopkins (57, pp. 96-98) the human organism should long continue to maintain integrations within himself, but should integrate progressively with the existing society in order to grow normally. Each culture has certain social needs that are centered in it and which are peculiar to that particular society. The person must meet these basic social needs in order to maintain normal integrating behavior.

Robbins lists the most fundamental social needs as:

1. The need for a continuing sense of personal security.
2. . . . need for developing a sense of personal worth.
3. . . . the need for living models of mature, well adjusted persons after which they can pattern their own lives (112, pp. 131-33).

The school environment should be lifelike, giving all students opportunities to gain experiences in actual living rather than getting only formal instruction. In this respect, physical education is in a favorable position to make a worthwhile contribution to the social effort of the school.

Nixon and Cozens state:

For physical education to make its full contribution to the cause, it should employ in its program as far as possible play activities which are socially significant and which give the individual opportunity to act as a member of the group. And in view of the fact that the social learning in group activities may be either good or bad, physical education should provide skilled and intelligent leadership which will insure the development of qualities and characteristics conducive to a better social order (96, p. 48).

Cowell expresses the same idea:

The major social function of education is to integrate the individual initiative so necessary for health, personal development, and progress with a degree of social sensitivity and social cohesion that is so necessary for survival. To these ends, physical education activities under skilled and intelligent leadership have much to offer (26, p. 53).

The school has become one of the most important agencies through which really effective cultivation of social habits and attitudes that form the foundation for successful group living may be experienced by young people (69).

A large part of the fundamental social training of the average individual comes about through the play activities of childhood. These actions place the child constantly in circumstances that are socially significant and through his response the person learns socially accepted ways of behavior.

Nash points out:

Every educational activity has within it the possibilities for integration, but no activities dominate the lives of children or the lives of adults to the extent of those in the realm of

physical education . . . the supreme contribution of sports and games lies in the opportunities found in them for integrating the group. In a game, the abilities of all members are integrated for the common welfare. If each individual has a contribution to make, the disintegrating forces of race, religion, and creed yield to the integrating ones of common objectives (87, pp. 268-9).

The physical education program consists of a number of activities that can contribute to the integration of individuals if these opportunities are recognized by the teachers. Full responsibility must be assumed because the very nature of the responses in game situations may be either negative or positive in their value. The status leader must promote these experiences and guide the participants toward those ends that are socially desirable and eliminate, insofar as possible, the undesirable outcomes.

Williams indicates the social values in physical education by stating:

As regards sense of justice, activities of physical education under capable leadership offer the richest opportunity in the school for education in forbearance, fairness, generosity, vital elements in this sense. What professional or occupational group has, even remotely, the influence to be exerted by the well trained physical educator? The ideals of the ministry are directed too often toward the life to come, a matter so complicated with legalistic and ceremonial forms that it is not of immediate concern for group protection and special needs. The ideals of business are, quite generally, maximum production of wealth to the square mile. Trade unionism, concerned with economic rewards for its members, interprets social welfare, all too often, in terms of class warfare. The only group in the world concerned with teaching the basis of a sense of justice is that represented in physical education. In this field,

under proper conditions, the teaching is continually "play fair," "be honest," "be square." The gymnasium and playground are laboratories where these standards may continually be illustrated in the face of the instinctive impulse to personal and selfish action (143, p. 108).

Cuber (29, pp. 186-94) contends that social integration results from both the sustenance interrelationships and the common values which the person learns through socialization.

PRINCIPLE FIVE: THERE SHOULD BE A COURSE OF STUDY WHICH IS EDUCATIONALLY SOUND AND BASED UPON THE INTERESTS, NEEDS, PURPOSES, AND CAPACITIES OF THE YOUTH IT SERVES.

Psychological Foundation

Findings from a number of psychological research efforts have been published in an attempt to better understand youth from twelve to twenty. Basically, these studies were directed toward collecting information that would indicate the needs of this age group and to furnish necessary data for planning school programs.

Cassidy contends:

These studies have clarified the understanding that the period from twelve to twenty is a transition period continuing the development of the individual from childhood to adulthood. In the life of the individual it is an extremely important period in and of itself; it is not, as many parents and teachers feel, just a mixed-up, stressful, groping, period of ambivalence to be gotten over as soon as possible (23, p. 69).

Educators gradually began to use the findings of early research and to direct their attention to girls and boys instead of emphasizing subject matter. This increasing concern

focused upon the needs of individuals (93, pp. 302-14). Cannon (22, p. 87) explained behavior of the organism as an inborn and continuous effort to maintain equilibrium; in the process, stresses, tensions, and physiological needs are satisfied by the organism in its efforts to maintain equilibrium. Snygg and Combs (121, pp. 208-25) maintain that all behavior is purposeful and that restoration of equilibrium is movement by the organism to satisfy needs. Since education is a process of changing behavior, for best learning the whole person must be considered in seeking and providing experiences that are meaningful for the learner.

Watson and Spence say the human being tends to behave in ways involving:

- Movement from physical deprivation (sex, hunger, lack of sleep) toward physical well-being.
- Movement from being ignored to being approved and admired.
- Movement from being unwanted toward being loved and given intimacy and tenderness.
- Movement from being worried and fearful toward security and peace of mind.
- Movement from being bored toward new experiences (139, p. 106).

This concept of behavior as movement to meet needs fostered considerable confusion concerning the various ways of using the word "needs."

As Cassidy explains:

. . . clarification was necessary to understand that needs arise from the structure of the organism, from the processes of the culture in which one lives, and from one's own particular way of interacting with one's own particular experiences (23, p. 71).

The educational needs of youth were compiled by the Co-operative Study of Secondary School Standards and areas of agreement are indicated in regard to these needs.

The study points out that youth needs:

- to learn to live with other human beings.
- to achieve and maintain sound mental and physical health.
- to learn to live in their natural and scientific environment.
- sound guidance.
- to prepare for work, for further education, or both.
- to learn to use their leisure well.
- to learn to live esthetically (6, pp. 29-33).

The program of physical education should be constructed with the interests, needs, purposes, and capacities of the youth it serves taken into consideration. In no phase of the high school curriculum can all of these needs be more adequately fulfilled than through physical education. It is in this area of education, because it deals with body in action, that more sensitive control may be exercised to assure more effective functioning (90).

As Scott points out:

Physical education contributes to the needs of the individual in many ways, including: development and maintenance of the organic systems of the body; development of neuro-muscular skills which are satisfying and useful both now and in future life; development of desirable attitudes toward play; physical education, rest and relaxation; and development of socially desirable standards of conduct as a citizen in a democratic society and an interdependent world (119, p. 157).

It must be recognized in the efforts to meet the needs of individuals that boys and girls have impulses and urges for action. In arranging for these psychological needs,

through physical education, experiences should be presented that will develop interest and satisfaction in many skills that are found in sports, dance, and recreational activities (90).

Adolescents have an intense interest in their bodies while they grow and develop. The internal physiological changes of adolescence are paralleled not only by external changes in body size and shape, but also by changes in attitudes and interests. During this time the person constantly compares himself with his age-mates. Any indication of slowness in development becomes a cause for concern. These variations in the rate of growth or development, if not understood, may become a source of anxiety. Every youngster at one time or another during this phase wonders if he is normal (52, pp. 21-28).

Havighurst suggests the following steps in helping youngsters adjust to their changing patterns:

- Use criteria of skill and physical development in grouping students for physical education.

- In biology or hygiene, teach about the physical changes of adolescence, stressing the normality of variability.

- Apply criteria of physical development in grouping students at the junior high school level.

- Use dancing and painting to build up appreciation of the beauty of the human body.

- Make it easy for a student to ask for information and assurance with respect to his own physical development (52, pp. 41-42).

Breckenridge and Vincent (14) concur with Havighurst concerning the flexibility of the physical education program for junior high school boys. Boys of this age are interested

in the continued improvement of game skills, and this interest lasts through the junior and senior high schools. These interests and skills develop consistently throughout adolescence, but it should be remembered in planning the program that there are wide variations of physical maturation within any group of boys at this level, with a resultant great difference in performance. Consequently, programs for this age group should not be stereotyped since some boys may be placed under a strain while others will not be challenged. Many youngsters at this level find themselves left out because of some physical defect, or a lack of energy due to rapid growth or poor nutrition. If the premium placed upon motor skills is too great, these individuals may develop feelings of inferiority because they do not gain the prestige or confidence usually attached to such accomplishments (14, pp. 304-05; 41, p. 78). In planning with and for students, maximum student acceptance should be sought in order that opportunities for satisfying experiences will be available to all students.

In the formulation of a course of study in physical education each school has its own unique problems involving many factors such as: size of classes, time allotment, background, and interests of students; also the preparation of teachers. Necessary changes, adjustments, and additions must be made in order to meet local needs.

Irwin suggests:

Basically, the program should be built around the more highly organized team sports and activities in which large numbers can participate during a class period. The individual and dual activities are extremely important; yet in a majority of schools the facilities and equipment do not provide the opportunity for an extensive program of them (59, p. 129).

Biological Foundation

An educationally sound course of study based upon interests, needs, and capacities of the youth served, is the concept in Principle Five.

In order to meet biological needs, physical education must accept as one of its purposes the development of vigorous normal growth through a number of large motor activities, such as the natural movements of daily life, free and individual play, games and sports, dance, athletics, self-testing contests, relaxation and rest, adaptive exercises, coeducational games, swimming, camping, and hiking. This inclusive grouping is necessary in order to meet individual needs adequately (90, p. 51).

In order to supply a variety of physical education experiences the teacher in the field should be professionally qualified and carefully selected. Educators in this area should understand the particular and peculiar needs of the junior high school youngsters, especially in so far as interests, capacities, and characteristics are concerned. These teachers must be naturally sympathetic and patient.

The basis for establishing the program of physical education must be the growth and developmental characteristics of the pupils. With the variance among preadolescent students in the junior high school, much careful and intelligent direction is required (50, pp. 105-09). Members of this age group are susceptible to fatigue. They have a rapid heart rate and are emerging with a greater resistance to disease. This is a period of rapid growth, while the heart and lungs are relatively small. There is a disproportionate growth between muscles and skeleton. At this time coordination for physical exertion seems to experience a lag (67, pp. 39-51).

An awareness of these limitations must be indicated in setting up the physical education program for these people.

Irwin offers these two suggestions for a course of study:

. . . 2. The activities should be selected from a physiological and anatomical point of view, and, if necessary, modified in order not to overtax the endurance through intensive competition.

. . . 4. Ample physical activity should be provided for students of this age through daily class periods and out-of-school activities (59, p. 127).

In planning the program of physical education to meet the needs of students, Scott says:

In relation to physiological needs, games and sports can make a major contribution to the physical and mental health of the individual. These activities present a most important source of physical and organic development through the vigorous use of the large, fundamental muscles of the body Through the instructional program, neuromuscular skills may be developed which make possible the practice of the games and sports through which the

necessary muscular exercise demands of the body are satisfied. The amount of vigorous exercise required by the body for optimum growth, development, and function will vary, of course, with the age, sex, and state of health of the individual (119, p. 158).

Sociological Foundation

The course of study in physical education should be educationally sound and based upon the interests, needs, purposes, and capacities of the youth it serves.

Physical education, through its program of diversified activities, offers opportunities for the individual to develop a code of socially acceptable behavior consistent with democratic ideals. By adhering to the rules and regulations of a game, a person learns to accept the traditions, customs, rewards, and punishments in society. The player in the game is in a rich social situation in which he has a sense of belonging and in which interest prevails and activity abounds (18). Group pressures are constantly exerted and his self concept is influenced. In circumstances of play, the youngster who thinks of himself as Mickey Mantle while at bat in a baseball game, must make rather serious personal and group adjustments when he strikes out.

Stoddard writes:

Where else can be taught as effectively such concepts as fair play, respect for the rights of others, willingness to abide by law and respect for it, the role of leadership, the place and value of self sacrifice, and the function of self control, the conditions that call for giving one's best

self for a cause, and a loyalty for one's own teams and respect for one's opponent? It is from these kinds of teaching situations, so prolific in physical education, that true tolerance and the democratic way of life may be won or lost (126, p. 521).

In program planning for physical education, it should be remembered that the participant responds not only as an isolate but also in terms of the interaction that takes place within the group.

Junior high school students show a marked social change from the egocentric tendencies exhibited in the elementary grades. There is a more profound interest in social relationships and it is the age of loyalty to the group, with a distinct desire to be an accepted member (15, pp. 102-27).

In regard to program planning, Irwin suggests:

1. The junior high school period should be one of prolonged exploration and experimentation.
- 3. The curriculum should be arranged to take advantage of racial and cultural backgrounds as well as present interests.
- 6. The curriculum should be flexible in order to provide a wide range of activities for the many interests and needs of the students with some provision for pupils to select certain activities in which they may have an interest (59, p. 127).

Along these same lines, Brownell and Hagman offer:

The skillful teacher of physical education seizes upon activities of apparent interest to students and uses these activities as a basis for developing interests and satisfactions in a wider span of physical events. In the final analysis, the success of any program of physical education lies in the degree to which the individual has learned to use the activities for the best adjustment of himself to his environment of the present

and his probable environment of the future. Of course, the best way to determine whether a child will properly adjust himself to the future is by his ability to adjust to his present environment (16, p. 21).

Skill plays an important part in arousing interest and bringing satisfaction. Youngsters of this age are immensely interested in acquiring a number of skills. Skills involving motor activities, skills in social situations, skills that enable them to succeed in the classroom are all pursued with the energy and interest of the age group. The often heard comment that "boys are interested only in playing football" may be attributed to the fact that nothing else has been offered in their physical education experience. If given a chance through a well planned and wisely executed program, boys will eagerly apply themselves to the instructional phase of the program.

Brownell and Hagman support this viewpoint by stating:

Education serves best when it provides a variety of experiences and assists youth in meeting these experiences in a manner approved by society. The biological drive behind most activities in physical education indicates their worth in education for social competence. But teachers of physical education need to set up learning situations of a social nature, teach the skills of successful accomplishment, arrange for rewards and penalties, and show the connection between the activity itself and others that confront youth in the home and community (16, pp. 22-23).

A specific example of the above statement is given by Oberteuffer in discussing cooperation. He says:

Cooperation was illustrated . . . in the physical education class playing softball. More specifically,

he learned it batting when the instructor arranged for children to take turns batting, did not allow anyone to monopolize the batting, branded any of the latter behavior piggish, and identified the plan of taking turns as "cooperative" and the virtue itself as "cooperation." Here was a teacher of a game who was as interested in teaching the behaviors as he was the skills and who knew how to identify value, which is the first step (99, p. 231).

Situations inherent in activities abound with examples of good citizenship. The physical educator should use these circumstances to enrich his teaching and to broaden the service of physical education to the individual and to society.

Cassidy sums up these ideas by stating:

We have been . . . showing that physical education is the sum of the changes in the individual caused by experiences centering in basic movement patterns. Physical education is a part of education with a unique task to the total objectives of the school and has as its aim orienting the individual in the persistent problem required of him at each stage of his growth. School physical education, then, is the process of orienting the individual in the persistent problems or in the developmental tasks of living. This is accomplished through selected and guided experiences centering in basic movement patterns (23, p. 133).

In a brief check list constructed by Jackson (61, p. 21) a recommendation is made that there should be a copy of the course outline in the offices of the superintendent, the principal, and the departmental office. The program is considered to be more effective if those concerned with administration, teaching, or engaging in it, have been represented in program development. In this check list, further consideration is given to the idea that no department can function

well unless reasonably detailed plans have been formulated and are reviewed and reevaluated periodically.

PRINCIPLE SIX: THE PROGRAM SHOULD BE DESIGNED TO COMBAT SEDENTARY LIVING AND PROMOTE PHYSICAL FITNESS.

Psychological Foundation

Movement is significant in man's life but civilization has removed much of the necessity for it. He no longer has to defend against wilderness dangers; easily controlled machinery performs many heavy tasks which formerly employed muscular exertion. Man has, with scientific advancements, increasingly become a "sitting creature." Work, the basic necessity for muscular development, has been all but removed during this civilizing process. The natural way has become the easy way. People today are losing the important muscle tone and strength needed to remain an efficient organism (99, pp. 17-18).

Today man must choose to be active. Physical education must create a desire on the part of students for movement. Regardless of what form this movement may take, it must be satisfying and attractive. In discussing this tendency, Nash states:

Spectator entertainment offers an easy method of escape, which can be rationalized by the individual as good for him. Much has been heard about fatigue, the tired heart, and that men need relaxation By constantly repeating the doses of passive entertainment in his leisure time, a

man becomes an addict. He actually experiences acute discomfort when these forms of activity are denied him. Witness those on vacation or in isolated places deprived of the radio, television, and motion pictures. Life becomes really a burden; therefore, seemingly the only outlet to the monotony is through manufactured pleasures, sold at mass production prices (86, p. 131).

It is the responsibility of the physical education teachers to establish in the thinking and practice of students the relationship between activity and fitness.

As Oberteuffer points out:

The state of being "in condition" or "fit" has long interested physical educators, physiologists, physicians, and people in general. It has become a term used in ordinary conversation; "out of condition" or being "in good shape". . . . To others . . . there remains only the long and continuous need of being able to meet daily responsibilities, to carry on from day to day in whatever lot is theirs with some efficiency and without debilitating fatigue or illness (99, pp. 79-80).

According to Cassidy (23, p. 123) and Oberteuffer (99, p. 80) the term "physical fitness" is an illusion or fictional reference to what should be recognized as a broad interpretation of fitness which begins with the concept of the organism as a whole.

Cassidy says:

The physical education teacher must be extremely cautious in speaking of physical fitness, physical health, physical recreation as a single objective; in truth they do not exist separately since we are educating a totality, a human personality. The psyche and the soma cannot be thought of or dealt with separately (23, p. 124).

The interdependence of all the parts and systems of the human organism must be recognized as fitness of the whole and a person develops or maintain fitness through particular attention to all of the accepted practices of the hygienic life.

Oberteuffer explains:

Fitness is affected favorably or unfavorably by the influences which contribute to or detract from all the functioning parts of the organism and from the organism as a whole. To attain or maintain this kind of fitness one must live the scientifically intelligent life, making the adjustments necessary to cope successfully with one's environment. That means prompt and competent medical care, a rational program of active recreation, and adequate and balanced diet, ability to meet life's problems intelligently, and control over a multitude of other elements without being oversensitive or concerned about any of them (99, p. 80).

An excellent explanation of fitness has been composed by Darling:

Physical fitness describes the functional capacity of the individual for a task. It has no real meaning unless the task or job for which fitness is to be judged is specified. The fit individual can perform the task repeatedly without undue fatigue and has a reserve capacity to meet and sustain unexpected stresses which may arise. Because of the complexity of the concept and the wide variety of tasks carried on by different persons, universal standards for its evaluation are not feasible. Their establishment in any form would be a misleading over-simplification (31, p. 764).

Stated differently, Karpovich says:

We will define physical fitness as a fitness to perform some specified task requiring muscular effort. It is evident that, since muscular effort may be evaluated in terms of strength, speed, endurance, there may be various aspects of fitness (67, p. 244).

If top fitness is desired for some special need or task, the individual must properly and completely go into training. The steps involved in such an undertaking would include: first, a thorough medical examination with all the remediable conditions corrected; second, a closely followed diet of wholesome food; third, a schedule of vigorous exercise; fourth, rigid restrictions on the use of tobacco and alcohol; fifth, sufficient rest each night of from eight to ten hours sleep; sixth, elimination of as many unbalancing factors as possible (67, pp. 240-49).

Physical fitness thus becomes an objective rather than an average or fixed standard.

Schneider and Karpovich point out:

. . . it is undeniable that physical activities help to keep the mind sound. Taking part in an enjoyable game increases the zest for life, eliminates unwholesome moodiness for the time being, erases worries and, at least to an extent, neutralizes the damaging effects of repetitive morbid ideas. A moderate degree of fatigue which follows physical activity may help to combat insomnia, and consequently the individual gets more rest (117, p. 256).

In describing phases of fitness, Morehouse and Miller state:

Psychological fitness for a task implies that the subject possesses the necessary emotional stability, drive or motivation, intelligence, and educability. Without these, he may fail even though he is anatomically and physiologically fit for a particular task (82, p. 268).

Biological Foundation

Principle Six indicates that the physical education program should be designed to combat sedentary living and promote physical fitness.

The original nature of man provided him with the means to develop and maintain organic efficiency. He was also equipped with urges and drives that impelled him to activity toward the maintenance of his physical well-being. The only approach to the proper functioning of the organs and systems of the body is through vigorous use of the muscular system. The proper functioning of the digestive, respiratory, circulatory, nervous, excretory and other systems of the body is primarily dependent upon activity of the big muscles during the formative stages of childhood and adolescence (184, pp. 17-26).

In discussing the sources of fitness, Schneider and Karpovich state:

The equipment that enables a man to combat adverse influences and meet the requirements of his labor is partly inborn and partly acquired. This equipment is divided into three main categories: namely, the morphologic, physiologic, and psychologic. The physical form and structure of the body constitute the morphologic aspects of the equipment. In large part these are determined by heredity, but no one today doubts the statement that "use makes the organ." Heredity determines the possible course and limits of development, but the use of an organ is absolutely necessary for its proper and full development. Graded and frequent use of organs is the instrument of physiologic development,

by which the capacity for activity is enlarged and a nicety of adjustment is attained. The mind is the master of the bodily machine; it, too, acquires greater capacity and better equilibrium and adjustment with graded and proper use. In proportion as these three categories of the body are properly developed and maintained there is preparedness for activity and a relative freedom from fatigue; that is, there is some degree of good health (117, p. 261).

The task of physical educators in this respect appears to be in aiding each person to be sufficiently fit to accomplish a day's work with a minimum of fatigue and to remain active throughout his life. With the many variations in individual choices for occupations, some individuals would train for heavy physical labor while others would prepare for light sedentary work. Regardless of the case, each must so arrange his life so the body is aided in maintaining a normal physiologic status. If particular care is not taken the body becomes, to a degree, unhealthy.

The degree of physical efficiency an individual has depends upon the interrelationships of many functions of the tissues and organs. An appraisal of the fitness of a particular person for a specific occupation would be difficult without a test that includes an amount of physical effort equal to that necessary for the performance of the exertions involved in that occupation. There must be adequate bodily condition for the most intense efforts as well as fitness for the requirements of everyday exertions (118, pp. 253-67).

Muscles that are properly exercised over a long period of time grow in size. The well developed musculature of the athlete is an example of this fact. This development is caused by hypertrophy of the individual muscle fibers, not by the creation of new fibers. Thus the expansion in the size of the muscle fibers causes the enlargement of and not an increase in, the number of fibers. In addition to this change, there is also greater toughness of the connective tissue that binds the muscle fibers together; this enables the muscle to withstand additional mechanical strain which may be placed upon it.

An unused muscle undergoes atrophy. This deterioration results in decreased efficiency of the muscle. In discussing the effects of muscle work and exercise, Zoethout states:

It is held that in a well-trained individual the mechanical efficiency is also slightly increased; that is to say, the muscles perform a certain piece of work with a smaller expenditure of energy than takes place in an untrained person As common experience teaches us, unaccustomed work is done very inefficiently. The causes of this greater efficiency in the trained lie in the following:

(1) The proper rate has been found at which the work should be done.

(2) The greater economy on the part of a trained man has by some been explained to be due to a better coordination of the muscles of the body. In performing a piece of work which is entirely new to us, we are likely to contract many muscles that are not concerned in the work. By practice we gradually eliminate these useless and extra-agent contractions; it is then said that we do the work with greater ease, or that the work is done more smoothly.

(3) By training, the body may rid itself of undesirable fat which impedes the movements of muscles or parts of the body or, as in walking or climbing, adds an unnecessary load and thus causes a greater expenditure of energy (150, pp. 82-83).

The physical educator who is above average in skill, and has eliminated the useless muscular contractions mentioned by Zoethout, can facilitate learning in the individual by pointing out the mistakes he is making in the execution of a particular skill. The student watches a demonstration by the teacher and then attempts to imitate that performance. In his efforts to acquire and refine the skill, the person has a tendency to overlook some of the steps necessary to execute the movement correctly. This is a most important function of the teacher, to aid each student in making the proper corrections in his efforts to perform the movement with economy of motion and maximum skill within the limits of his ability.

The length of time a person can continue a certain piece of work is increased considerably through practice. Fatigue is reduced as endurance increases. Endurance is governed by the rapidity with which the right amount of food and oxygen can be brought to the muscles and the speed with which the waste products can be removed (11, pp. 103-26).

The differences between fit and unfit men are illustrated by Morehouse and Miller:

The fit man usually shows the following physiological advantages over the unfit man of the same height and weight when both are performing the same

piece of moderate work which both can sustain in a steady state: lower oxygen consumption, slower pulse rate during work, larger stroke volume of heart, lower blood lactate during work and faster return of blood pressure and heart rate to normal after work. If both fit and unfit men are performing the same piece of exhausting work which neither can sustain in a steady state, the fit man usually shows longer duration of effort before exhaustion, higher oxygen consumption, slower maximal heart rate, larger stroke volume, higher blood lactate and faster return of blood pressure and heart rate to normal after work (82, p. 270)

Johnson describes a fit man:

The fit man carries on a given grade of moderate work with less displacement of his physiological equilibria. He can establish steady states at higher grades of work. If forced, he can displace his physiological equilibria further and for a longer time. Finally, he has better recuperative powers in the sense that after a bout of exhausting exercise he returns to his normal resting state more quickly (63, p. 535).

The effect of training upon the heart is one of the most controversial topics in the physiology of exercise. According to Schneider and Karpovich (117, pp. 276-91) one of the main causes of disagreement may be found in a lack of uniformity of standards for appraising normal hearts.

In 1933, Steinhaus indicated that all researchers who were concerned with the effects of exercise upon the heart could be divided into three groups.

These groups are composed of those who believe that:

- (1) the size of the heart in a trained athlete lies within the normal limits;
- (2) training may cause either no change or an enlargement of the heart (without hypertrophy) due to increased vagotonia;

(3) training results in a physiological hypertrophy of the heart fibers (124, pp. 103-07).

Vagotonia is a condition caused by overaction of the vagus nerves with a resulting modification of function in organs innervated. The vagus nerve is the tenth cranial nerve and its function depresses heart action (64, p. 114).

Deutsch, Kauf, and Warfield (33, pp. 89-91), who examined many athletes in early studies of the effects of exercise upon the heart, have reached the conclusion that participation in athletics frequently brings about changes in the heart; this is due chiefly to vagotonia. They also found that the majority of athletes have hearts of absolutely normal dimensions.

In discussing hypertrophy, Fulton states that it involves:

. . . increase in the size of contractile elements . . . the amount of contractile material, as well as the quantity of substances required to furnish energy for contraction, may be increased, and provision thus made for more effective performance of required tasks Whether or not the increased work output of athletes and those engaged in daily occupations requiring long-continued strenuous exercise ever leads to hypertrophy has been much discussed, and no completely satisfactory answer has been found The probability is that the bulk of the heart will reflect the load which it carries, it being therefore larger in the athlete and in the hard worker than in a person of sedentary habits. The increased output associated with participation in athletics and with the strenuous occupations is relatively insignificant . . . when considered in terms of duration time intensity, and it is not to be expected that the increase in heart size in the former would in any way approach that seen in pathological conditions (40, p. 794).

Concerning exercise and heart damage, Smith says:

. . . strenuous physical exercise and hard manual labor do not cause, or predispose to, heart disease; that such activities do not cause abnormal cardiac hypertrophy and that athletes do not develop early disability and die because of exercise they indulged in while in school (122, pp. 122-23).

An examination of the immediate effects of vigorous physical activity on heart size was conducted by Wolfe and Digilio (146) with 15- to 17-year old contestants in a two and one half miles cross country run. A physical examination of each person after the race indicated no injurious effects. The electro-cardiograms made of each runner showed no evidence of organic disturbance. In no instance after the race was there any increase in heart size as compared to the measurements taken before the race. In most cases the heart was smaller at the end of the contest. During several other experiments there was absolutely no evidence of any relationship between participation in athletics and heart disease.

Marvin expresses this viewpoint:

When a middle-aged or elderly man collapses on the tennis court, while running hard for a train, or carrying a heavy load upstairs, the exertion is often blamed . . . almost no physical activity can strain a healthy heart, much less damage it. The other muscles refuse to function long before the heart gives way. Danger is real when the heart is diseased; then, extra effort can cause collapse Even heart-disease patients may continue a certain amount of exercise, the nature and extent depending largely upon the seriousness of their condition and the amount to which they are accustomed (78, pp. 281-82).

During muscular activity there is an increased demand for food and oxygen and for the removal of waste products and heat. These demands can be met only by a larger volume of blood flowing through the active muscles. The faster pulse rate continues for some time after the period of work has been finished. There is a marked difference in the length of this pulse rate between the trained and the untrained heart. The rate of increase is far greater for the untrained heart and the length of time of acceleration continues longer after the work has been stopped. Five minutes after performing a certain piece of work the pulse rate of the trained person is almost normal, but the pulse rate of the untrained individual is still 30 per cent higher than it was prior to the work. In strenuous and prolonged exertion, the period of recovery may be an hour or more; but in this instance also, the rate of the trained heart subsides sooner than the untrained (150, pp. 106-27).

Evidence indicates that trained athletes usually have a greater stroke volume at rest than do non-athletes. This difference is only relative as Stewart and Watson point out:

If the stroke volume, in cubic centimeters, is divided by the body weight, in kilograms, the ratios for both athletes and non-athletes will fall within the range of 0.81 to 1.03, which means that the volume of the stroke is adjusted to the weight of the body (125, p. 35).

Schneider and Karpovich state:

The conclusion to be drawn from all sources of data is that the heart is capable of responding to the demands of physical work by an increase in its stroke volume. A greater minute volume of blood may be supplied without undue strain on the heart (117, pp. 151-52).

Apparently the heart muscle, like any other muscle, reacts to the greater demand physical activity imposes upon the circulatory system. The term "athlete's heart" has the connotation of a pathological enlargement of the heart brought about by participation in athletics (119, pp. 167-68).

Concerning the use of the term, "athlete's heart", Schneider and Karpovich maintain that:

Using this term . . . is unfortunate because hypertrophy of the athlete's heart is a physiological work of hypertrophy; the term "athlete's heart" is just as unfortunate as "athlete's foot" and should be dropped (117, p. 154).

Kahn states a fundamental principle of exercise as follows:

. . . an organism is not worn out by activity, but on the contrary attains the peak of its productive powers only by means of judicious use. What is true of the entire body is valid for each of its parts. Joints must be used in order to remain supple . . . Muscles must be exercised daily--indeed, almost to the point of exhaustion--so that they will become powerful and attain their maximum development. As soon as exercise ceases, muscular function becomes impaired. The kidneys are not injured by the fact that they must carry out the complex process of filtering the blood uninterruptedly for a period of seventy years. The brain is not impaired by mental activity and experience . . . The principle of exercise is valid for man: the body attains and retains the maximum development of its capacities only by continued and judicious exercise (66, p. 44).

The maintenance of physical fitness has become a problem in present day society because many of the tasks performed as daily activity in the past are no longer necessary.

Morehouse states:

Environmental demands are being reduced to a level in which physiologically inferior members of the community can thrive. There are now very few occupational tasks which require the employment of the physiologically superior segment of the population Ease and comfort, from a physiological point of view, are insufficient to produce a maximal condition of well being. Other values such as purposefulness, accomplishment, and expression are necessary for the fulfillment of human aspirations. All these values affect man's physiological functions and, therefore, affect his well-being and enjoyment of living. . . . Just as sedentary living diminishes the predisposition for physical activity, so does participation in frequent and regular exercise result in an increased proclivity for exertion. There is an elevated desire for activity as physical condition is raised by regular exercise (81, p. 20).

In planning the physical education program, the physiological needs of individuals may be met by including activities that present an important source of physical and organic development through the vigorous use of the large, fundamental muscles of the body. In discussing the instructional program, Scott says:

. . . neuromuscular skills may be developed which make possible the practice of the games and sports through which the necessary muscular exercise demands of the body are satisfied. The amount of vigorous exercise required by the body for optimum growth, development, and function will vary, of course, with the age, sex, and state of health of the individual. It is generally agreed, however, that normal children up to puberty require several hours of big-muscle activity a day. High school

youth as well as those through college require a minimum of two hours a day of vigorous activity. The minimum for normal adults is at least one hour a day with variations in relation to vocation, age, and state of health. No matter what the age, however, proper development and maintenance of organic vigor is a requisite for a diversified, healthy life, and comprises an integral part of the realization of one's best self (119, p. 158).

Bucher concurs with this exercise requirement for the normal child. He states:

The normal child needs from two to six hours of activity a day. In that all of this activity cannot take place during school hours, the time spent in activity in school should be devoted to providing instruction which may be utilized in after school hours (18, p. 202).

Schneider and Karpovich support this view, when they point out:

The purpose of physical education is not to win games for one's alma mater, but to help each person to attain an optimum level of development predetermined by his structural potentialities (117, p. 285).

Apparently the physical education activity program is obligated to contribute to the fitness of every individual and directs its efforts toward the problem of sedentary living. In program planning, the relationships between exercise and the heart must be considered. Since the human being is an active animal, he thrives best on exercise that has a purpose. This purposeful action compensates for the many hours spent at a desk or in amusements of an inactive nature. Of all the vital organs, the heart is the first to show signs of an inactive existence. The normal and undamaged heart is in no

way harmed by strenuous school sports. Due to the fact that the heart is a growing organ and does suffer from temporary fatigue, youngsters should be encouraged to rest when they become tired. Participation in physical education should be limited during periods of illness and sufficient time allowed for recovery. The school or family physician should express the deciding opinion upon the condition or ability of a person to exercise in recuperative situations.

Participants in all sports and games should be encouraged to maintain a friendly status during all activities and helped to realize that these contests are exciting, requiring varying degrees of skill and to accept the outcome with good grace and fellowship (98).

Sociological Foundation

Principle Six deals with the physical education program that is designed to combat sedentary living and promote physical fitness.

Society is faced with the responsibility of providing acceptable ways for youth to satisfy the natural urges for action. Present day industrialized living offers few opportunities for strenuous physical exercise.

As Williams points out:

. . . it appears that the individual prepared by nature over thousands of years for a life of physical struggle is catapulted into a society that scarcely knows what this means. The necessity for providing

an equivalent has been recognized, however, and physical education exists as a great social force to guarantee to youth the fulfillment of these early adaptations The society that will not give a youth a chance to make an end run, or tackle a charging back, or beat the runner to a base by a perfect throw, must of necessity take these into custody when they steal and run and hide (143, pp. 120-21).

Leadership must provide wholesome situations and guide the experiences of youth by offering constructive motor activities. Through the presentation of these game situations opportunities for social growth are given (99; 119).

In discussing these aspects of play, Cowell states:

Not only have play activities been accepted as socially valuable features of life, but also as valuable criteria of social adjustment and mental health. Without participation in games, the child has little opportunity for failure, success, fears, or thrills which make for an accumulation of experience that builds morale. The attitude of a child to his playmates is an essential index to his character. Socialization is an important part of the educative process. The timid, non-cooperative, anxious, and indecisive child lacks inner security and self confidence in social relations. . . . In games and sports the child learns to control his body with fine nerve-muscle coordinations. He becomes more skilled and graceful. In the same situations and in a similar manner he learns to be less clumsy in his social relationships. He becomes more skilled and socially graceful in dealing with other personalities (27, pp. 147-55).

As a person develops, his behavior is usually altered toward consideration of others and he gradually assumes the responsibility for his actions.

Oberteuffer points out:

The problem for education is to bring what forces it can to bear upon the individual so that social

awareness can be developed on a high level in as many aspects of life as possible. No child is ever born a socialized being; he has to be taught the behaviors which make him acceptable in society. Through such a process of learning he achieves a recognition of his own place in the scheme of things, he slowly, and usually imperfectly, comes to know the meaning of "give and take," of co-operative effort, and of the place of competition as a medium for action (99, pp. 207-08).

Physical education must be conducted in such a manner that it will meet social objectives. Pupils must be given opportunities to evaluate themselves in relation to the group, to reach wholesome attitudes and appreciations of their weaknesses and strengths, and to acquire an understanding of their bodies as healthful organisms (73).

Lee and Wagner continue:

For ready social acceptance it is of prime importance for an individual to have good physical bearing and poise. It also adds to one's "staying powers" socially to be skilled in a variety of recreational activities so that one can be a good companion for leisure hours. Being fit, feeling "tops," having a body well trained in the fundamentals of body mechanics, which of course includes training in good carriage, are important features of a passport to social acceptance. Beyond that it is important to be accepted not only as a desirable member of one's social group but also as a worthwhile citizen of one's community (73, p. 48).

The scope of the problem of fitness of youth today and the determination to do something about it, is demonstrated by the President's Conference on Fitness of American Youth, which was held June 18-19, 1956. About 150 leaders in the areas of sports, education, youth programs, recreation, health, and related fields met to discuss total fitness of all American

youth, with special attention directed at the 5- to 17-year old group. The conference was concerned with fitness in a broad meaning of total fitness, with implications for physical, mental, social, and spiritual well-being. The various groups were interested in making suggestions to President Eisenhower which would further efforts to help all American youngsters become more fully fit (81).

A study conducted by Kraus and Hirschland (71) in 1953, indicated physical deficiencies of American children as compared with European children and focused attention on the problem of fitness. Children between the ages of six and nineteen years were tested. There were 4,458 American school children and 1,987 children from Austria and Italy included under similar testing conditions. In the American group 56.6 per cent of the children failed one or more of the tests while only 8 per cent of the European children failed.

Kraus and Hirschland conclude:

The major difference between these two groups is the fact that the European children do not have the benefit of a highly mechanized society; they do not use cars, school buses, elevators or any other labor saving devices. They must walk everywhere. Their recreation is largely based on the active use of their bodies.

We have the impression that insufficient exercise may cause the dropping of muscle efficiency levels below that minimum necessary for daily living. The same lack of exercise may cause inadequate outlet for nervous tension (71, p. 18).

PRINCIPLE SEVEN: THE PHYSICAL EDUCATION PROGRAM SHOULD DEVELOP PHYSICAL EDUCATION POSSIBILITIES BY ENCOURAGING WISE USE OF LEISURE TIME AND BY SUPPLEMENTING COMMUNITY FACILITIES FOR JOINT RECREATIONAL USE.

Psychological Foundation

Leisure has become a new and exceedingly important element in present day western culture. With incomes at a high level and the five-day work week more the rule than the exception, avenues in the lives of individuals should be opened that will lead to creative activities as wide and as deep and varied as are needed to challenge the human spirit.

Morgan states:

There is probably no more significant indicator of the temper of the times than the attitude of people in general toward play for children and the use of leisure time for adults. When life is hard, it takes a tough mortal to survive In times when man becomes more prosperous and finds more time for leisure, his attitude toward play becomes different. It is contended that pleasure should be cultivated for its own sake, that children not only should be encouraged to play, but should choose a vocation in which their play interests could be incorporated in their work (83, p. 418).

Children always take their play seriously when they are permitted to play spontaneously, therefore these pursuits are important to them. Play and/or recreation is quite frequently discouraged by adults who take themselves too seriously. Children are observed during play constantly changing from one activity to another due to their short attention span and anxious adults, who value persistence, are concerned over

the flitting about. Unsympathetic parents frequently find it difficult to see value in any endeavor other than the kinds in which they are engaged. Play needs no justification. Play is the name attached to the activities of life that are interesting to the participant. Sympathetic observation of the play efforts of children can be the key to understanding individual personalities (21; 58; 84).

At all age levels children have potentialities for acquiring a larger number of useful and enjoyable motor skills than have been provided for in the usual educational program or in their everyday experiences.

Gates states:

From about the age of eight years there is a falling off in the number of physical activities in which children engage. As children move on toward the adolescent level many of them tend to become more sedentary and to become spectators rather than participants. This tendency continues through the high school and college levels. A part of the decline in motor occupations occurs by virtue of the encroachment of other interests, but a part of the decline also seems to be due to the fact that persons encounter practical difficulties in utilizing, at later age levels, many of the motor skills which they practiced assiduously in their games at earlier levels and to the fact that their earlier education has failed to stress skills and crafts that not only are enjoyable in childhood but also practicable in later years (41, pp. 78-79).

This statement leads to the conclusion that in the education of children there must be recognition of the possibilities for motor learning that would provide enjoyment and wise use of leisure during childhood and that also would be

useful from the standpoint of health and recreation upon reaching adulthood.

In a study by Lehman and Witty (75, pp. 103-10), of the median number of different play activities undertaken by individuals at different ages, there was noted a steady decline in the various kinds of games from age eight to twenty years of age. In late adolescence and at maturity, the average individual is considerably more sedentary and engages in fewer muscular exertions than does a younger person.

This decrease in participation in motor performances is due, in part, to the merger of separate random movements of childhood into larger and more complex enterprises in later life. Adults also have a tendency to spend more time on selected past-times rather than distribute their time over a wide range of activities. Some other reasons for these changes include such adult conflicts as competing interests in the daily work routine, lack of facilities, failing to utilize opportunities for more active endeavors, and in many instances, inertia (41).

A program of physical education should take into account these changes from motor activity to relative inactivity in planning for the education of children. Perhaps this planning should emphasize activities with reference to the future. Perhaps many possibilities are now overlooked in the program from the point of view of future utility (111).

The extent to which opportunities to acquire some degree of skill during childhood may influence a person's leisure time pursuits as an adult is indicated in a study by Nestruck (95, pp. 41-43). It was found that few men were active in leisure endeavors in adult life if they had not had some experience in them before the age of eighteen. On the other hand, about one half of the men who participated in various games and sports during childhood years also participated in them as adults.

Biological Foundation

Principle Seven stresses the necessity for developing physical education possibilities by encouraging wise use of leisure time and by supplementing facilities for joint recreational use.

Principle Seven is essentially sociological in nature and therefore its foundations will be more fully documented in that section.

The biological implications of this principle have been covered in several other principles under biological foundation (Principles One, Two, Four, Five and Six). The interrelationships between these principles of physical education occur frequently, making the task difficult to distinguish clearly between overlapping areas. Certainly, in regard to recreational pursuits, all of the effects upon the individual should be considered. A few examples from previous principles

will point out these relationships and their carry-over to this particular one. From Principle One: the biological nature of children determines that they should be active and that they should engage in the many and varied movements called play. The physical education program would encourage the wise use of leisure time through this multitude of fundamental motions referred to as play. In Principle Two: physical education can and does make its contribution to the total educational effort of the school through maintaining and improving the vigor and vitality of each individual, which enables him to perform the necessary tasks demanded of him. Only through a planned approach can the individual learn and use carry-over activities during recreational efforts that will help him maintain organic vigor. Principle Four: physical education today emphasizes education through the physical and is based on the biologic unity of mind and body. Life is lived as a whole and the need for healthy exercise during leisure hours can be fostered through a well planned and wisely executed physical education program. Principle Five: in order that the individual needs may be adequately met, physical education must contribute to the development of vigorous normal growth through a wide range of large muscle activities. Principle Six: movement is significant in man's life, but civilization has removed much of the necessity for movement. The natural way has become the

easy way; people today are losing the vital muscle tone and muscle strength needed to remain an efficient organism. The course of study in physical education should be designed to combat sedentary living and to promote physical fitness.

Relaxation and spontaneous, pleasurable, expression are the chief concerns of the individual in leisure time activity. The relief from muscle and nerve tension is a result of play and is a valuable means for preserving the health of the child, adolescent, and the adult. In order to be healthy mentally, individuals need to learn how to relax during their leisure. People have a great desire to play and are brought together in satisfying this urge (93; 143).

Sociological Foundation

The physical education program should develop physical education possibilities by encouraging wise use of leisure time and by supplementing community facilities for joint recreational use.

During childhood much of a person's social activity with others takes place by way of active play, and a child's accomplishments in motor performances have an important influence on his social adjustments. For the usual child, much personal satisfaction is gained from the acquisition of motor skills, which in turn contribute to good social and emotional relations with others (7).

Piaget (106, pp. 109-14) discusses play as practice in socialization and has divided the process into four stages.

The first stage is interpreted as individual in character because the child plays according to the dictation of his own desires. Between the ages of three and five the child is egocentric. He has no interest in either competing or co-operating with other children. The second phase occurs at about seven or eight years and is a period of incipient co-operation. The child desires to win, and recognizes the value of rules as a means to aid him in out-performing others. At about ten years of age the third stage finds the youngster concerned with the rules of the game, and with a strict adherence to them. In the fourth phase, the rules of the game become codified; play has become a social phenomenon.

Most people make some kind of plans for the work to be accomplished on a certain day, and they also attempt to allot time for adequate periods of recreation. A schedule will vary with the type of work in which an individual is engaged, the neighborhood in which he lives, his age, and his physical vigor. Recreational activities should certainly not be left to mere chance, for they represent the results of careful planning and supervision, by experts, for adults as well as for young people (20, pp. 89-97). There are commercial recreation enterprises that are unwholesome in many communities. These enterprises include poolrooms, night clubs, race tracks, gambling establishments, and unrealistic movies, radio, and television shows. While these kinds of entertainment may not

be definitely harmful to the physical and mental health of those who indulge in them, there is little value for healthful relaxation in them. Attempts have been made in many sections to place legal restrictions on these kinds of enterprises but they are not always successful. In addition to regulation and supervision of recreation, there is also a need for education of those who seek ways to employ their free time (28).

Recreational programs frequently receive attention when the problem of juvenile delinquency is discussed. Recreation is not a cure-all for delinquency but it can contribute to both prevention and treatment. Kraraceus (70) has listed twelve cardinal defects that must be remedied if the community recreational program is to serve the needs of all boys and girls and in this way act as a deterrent to juvenile delinquency. Of the twelve, the following have special significance:

. . . 3. If the child takes part in a recreational program, this usually means that he is engaged in some sports program that calls for a specialized skill possessed by only a few children.

. . . 7. Children and youth are ordinarily given very little real opportunity to participate in the planning or the conduct of their leisure time activities.

. . . 11. Despite the fact that nearly every educational policies commission set up in recent years has emphasized the "worthy use of leisure time" as one of the major objectives of the schools' program, the systematic development of recreational skills and attitudes has received scant attention in the classroom, gymnasium, or on the playground.

. . .12. There is little or no attempt at evaluation of the recreation program, either within specific organizations or on a community-wide basis (70, pp. 320-21).

In discussing the effects upon the individual and the functions of the community in recreation, Crow states:

Play is a normal human activity. Healthy individuals are active either mentally or physically during all their waking hours. Therefore, desirable opportunities and equipment for socially approved recreational activities ought to be made available for everyone. Social and individual benefits accrue to the community that is foresighted enough to provide interesting and worthwhile recreational opportunities for persons of all ages (28, p. 305).

Modern thinking recognizes that the school is a vital part of the total cultural pattern of society and that there are increasing responsibilities for giving attention to the social processes involved in education for citizenship. The common problem of supplying socially acceptable activities for all ages may be successfully met by the combined efforts of school and community. If those things that are going on within the school are related to what is going on outside the school, then the school becomes an integral part of the community and more effective learning is achieved. The influence of the community school is cohesive (115, pp. 263-87).

Cowell and Hazelton point out:

The school is no longer isolated from the community. The YMCA, the Boy and Girl Scouts, the 4-H Clubs, and a host of similar institutions supplement and complement the efforts of the school and become integrated with the educational purposes of the school in a practical way. Education is not limited to the four walls of the classroom (25, p. 13).

One of the hopeful social signs of recent years is the increasing development of well organized community recreation programs. From the field of physical education must come recreational leadership. Anti-social behavior results when people have not had favorable chances to learn how to behave in more socially desirable ways. Through performances in play situations the child is constantly facing circumstances which are significantly social and ones in which he must respond in an acceptable manner. The play life of children can and does degenerate into harmful or vicious activity that may lead to crime. Recognition of this fact indicates the need for good adult leadership in many types of organized recreational pursuits. In order for physical education to make its full contribution, it should include in its program as many play situations as possible that are socially significant and give the individual opportunity to act as a member of the group (96).

Physical education can aid in solving this problem by including in the curriculum activities adaptable to use in leisure time.

Voltmer and Esslinger suggest:

Preparation for all these leisure hours spent in the realm of sports is one of the major objectives of the program of physical education. The practice of postponing until adulthood the education in golf, tennis, handball, volleyball, . . . and other big muscle play activities of adults has always failed and will continue to fail to produce satisfactory results to produce the most favorable

educational results, some preparation for the leisure activities of the child should be provided throughout his school life. It would be a mistake to select activities entirely in keeping with adult needs (137, pp. 80-81).

The use of facilities by out-of-school groups should be encouraged.

Brownell and Hagman contend:

In public schools, the community owns the facilities anyway, hence educational administrators need only to establish a policy and a few procedures to resolve the problem to the satisfaction of all concerned. These procedures relate to the techniques of granting permission when outside groups request the use of facilities, adequate supervision of the participants, whether the group or school shall furnish the equipment, and who shall pay the operating costs. Wide community use of the physical education facilities not only fosters the development of interests and skills in recreational pursuits, it also serves as an excellent means of stimulating good public relations for physical education in particular (16, p. 331).

There should be close cooperation between the schools and those city agencies dealing with youth. Playgrounds should not be idle so much of the time; arrangements can be made between the educational institutions and the city recreation department for fuller use. There are further possibilities for providing recreational uses of school facilities in the afternoon and evenings by youths and adults (20).

Another example of school-community cooperation is demonstrated by efforts to broaden the physical education program by using community and commercially owned facilities. Arrangements can be made to use community parks, play fields, swimming pools, and bowling alleys. Special rates are

possible to cover the service charges involved. Educational authorities should examine the commercially owned facility to determine whether or not the activity is a wholesome one, if the environmental conditions are satisfactory, and if the activity is conducted under pleasurable conditions. If the decision to use this type of facility is reached, a teacher employed by the school system should be in charge, even though part of the teaching may be done by someone connected with the commercial concern. However, caution must be exercised at all times against undue pressure from business groups to exploit the youths through encouraging them to patronize the establishments of commercial recreation (90).

Communities are composed of a number of persons who have similar needs, traditions, manners and common interests. The school and its physical education program have certain responsibilities in meeting the needs of the community. The institution must initiate certain function and services as they are needed, and it must also eliminate activities that no longer meet needs.

Cowell and Hazelton say:

The physical education area can provide effective service within the community for all citizens. It can encourage a harmonious and cooperative relationship among the various town and city agencies operating the leisure-time programs of the community (25, p. 54).

**PRINCIPLE EIGHT: PHYSICAL EDUCATION PROGRAM CONTINUITY
SHOULD BE PROVIDED IN ORDER TO CREATE
THE BEST POSSIBLE TEACHING-LEARNING
SITUATION**

Psychological Foundation

School experiences should be designed to follow the natural continuity of the learning process. The types of learning activities engaged in by pupils should result in behavior patterns of motor, intellectual, aesthetic, and moral types, plus knowledge, attitudes, appreciations, abilities, and skills that are clearly useful in the immediate world of the learner (10, pp. 96-132).

The nature of a desirable learning situation involves three phases. First, the learning activities must be unified around one central purpose. Second, activities must be continuous and simultaneous, which means that they are related to one another in a useful way. Third, the movements must be vividly and functionally interactive with the environment. A learning experience that is centered around a purpose real to the learner and one which is continuous, simultaneous, and interactive with the environment is said to be an integrating experience (19, pp. 27-41). An example of applying these principles through physical education might include the following steps: first, a boy wants to learn to bat in order to play on an intramural team; second, he may seek help from the teacher, watch a film on how to bat, read how to bat and apply

this information to practice in batting; third, other people are affected by the learner both during the process and in application of the skill. Pressure from age mates may affect the quality of learning, recognition by others of the newly acquired skill, success in being chosen for the team, adjustments necessary with those who might have been left out, and learning the rules and regulations of the game are some of the results of the learning activity and functional interaction with the environment.

The beginner's attempts at handwriting, skating, or any other skill are undifferentiated mass movements. When a child first uses a pencil his whole body seems involved in the act of writing. Maturation and experience bring contacts with many directional influences, which eventually lead to a series of coordinated movements. These performances are called skills and are employed to meet the needs of the individual. Early in the learning situation the learner is awkward in his movements and it should be emphasized that this is natural during the learning period and will be replaced gradually with a smoother performance as the skill is mastered. It is wasteful to attempt to obtain given reactions from persons in advance of maturation and experience. Natural activities fitted to the level of maturation have been substituted for precision drills in physical education (56, pp. 344-47).

Relatedness has become the central concept in the psychology of learning (41, pp. 297-325). The teacher can facilitate learning by pointing out significant relationships that students might otherwise not see. An important educational purpose is to stimulate students to discover relationships, to organize ideas, and to bring experiences from many sources to focus on new situations. It is essential for the teacher to remember that individuals actively create unification in themselves, they do not simply absorb such a condition as a completed product (50, p. 108). Learning is more than a process of differentiation or of moving from whole to part. It is also a method of building up, of fitting parts together in new relations to form new wholes. Many acts of skill involve the utilization of responses that have previously been formed in other contexts. Purposive educational procedures should stimulate and facilitate the learner to systematize, to integrate or unify the multitude of things which he learns (74, pp. 19-31).

Thorndike (129, pp. 99-133), during investigations of integrative forms of learning, found that unless the individual senses that there is some relation between two situations, he may experience them in sequence repeatedly without forming an association between them.

In general, school curricula reflect uniform attention to progression, sequence and continuity. Learning experiences

are planned so that each one grows out of the preceding and prepares pupils for the experience to follow. This results in all children in the same grade level having achieved somewhat similar standards. Sequence and continuity are based on an awareness that children grow in complexity and maturity; they start with simple movements such as block building, proceed to games of low organization, and finally to more complicated team games (74, p. 20).

Voltmer and Esslinger state:

The physical education program should show progression from the kindergarten or first grade through the twelfth grade. This requires that the elementary, junior and senior high school physical education programs be carefully integrated. Unfortunately, in many instances, the programs at these different school levels are completely unrelated. This results in overlapping and duplication in certain areas and in complete neglect in others. A program that is well integrated will accomplish significantly more results than one which is not (137, p. 79).

The qualities, skills, and attitudes, desirable for high school graduates, should be established by every school system and the program at the various grade levels should be developed in order to accomplish these objectives. All of the activities on each of the three levels, elementary, junior and senior should be planned and conducted with the interrelationships of the many skills included in the teaching.

As Sharman points out:

If Looby Loo were taught in the first grade, repeated in the second grade, and taught again in the third grade, one would be likely to conclude

that the progressive experiences of the pupils had not been considered in the selection of the program content. If basketball were taught in every grade from the fifth through the senior high school one would probably conclude that either the interests and needs of children do not change as the result of growth and new experiences over a period of years; or no effort had been made to select, classify, and grade the instructional materials. There are so many important activities which should be taught in different grades unless there is a new emphasis or a new goal (120, p. 14).

When students can perform certain skills of a particular game with reasonable proficiency, they should not be expected to repeat those experiences day after day. Neither the physical education instructional period nor the curriculum is designed to be merely recreational.

Oberteuffer says:

To maintain its place in education, physical education must provide for progression--from one skill or understanding within an activity to the next and the next, and from one activity to others of progressively greater difficulty If physical education is to be fully educational in character, it must seek--and get--progression, using repetition only when it is helpful in learning and for recreational purposes (99, p. 292).

The curriculum in physical education should be constructed so that students will have time to learn in an orderly sequence. Any activity should be taught daily until real achievement can be noted. If swimming is one of the course offerings it should be scheduled in consecutive class periods rather than one day per week. Rather than have a different activity for each day of the week it is better practice, and

contributes more to learning, to arrange the program so that three days each week are devoted to one activity and the other two days to another kind of course offering. Good teaching involves staying with something until progress in the students may be recognized (5, pp. 96-97).

Voltmer and Esslinger state:

If a skill is worth acquiring, it should be well acquired. This does not necessarily mean that every skill must be thoroughly mastered by every student in the class. It suggests rather that the average student may be able to perform the activity with a fair degree of skill (137, p. 80).

The length and distribution of practice periods are important considerations for effective learning. While there is some agreement that these sessions are most effective when they are short and are spaced over a period of time, some psychologists contend that when the subject matter is extremely interesting and meaningful to the learner, periods of practice may be longer. If the physical educator were teaching tumbling and the members of the class were very much interested and enthusiastic, the instruction period could be longer and the time between practice periods could be less. Just the reverse would be true if the group were disinterested, indifferent, and could not see the need for developing tumbling skills (18, p. 268).

Biological Foundation

Physical education program continuity should be provided in order to create the best possible teaching-learning situation. Physical growth is not only growth in height and weight, but also includes all those changes within the tissues and organs of the body that make it possible for the individual to be healthy and to use his body with increasing effectiveness throughout life. The basis for understanding the growth problems of the individual child is available for all adults who are concerned with the knowledge of how children grow. Growth is based on the sequential changes and the variability in rate of maturation from time to time and from child to child. The application of this knowledge will enable the adult to set the stage for the child, fit his activities to his maturity and rate of physical development, eliminate obstacles to development, and provide needed prerequisites for growth (101, pp. 60-65).

According to Jones (65, pp. 81-89), after basic competence has been achieved, concentration upon a particular skill decreases and it is used in more creative play, work, or even other uses. In this connection, Hartley (49, pp. 206-38) discovered that at first there is satisfaction in gaining adroitness in any learning situation with further enjoyment gained by putting the skill into practice. Seldom will there be renewed concentration on learning itself, and this will occur only when some new use of the movement is being explored.

This may be illustrated by an example in basketball; with the development of dexterity in the more easily executed shots boys will begin to attempt the more difficult ones, the hook shot for instance.

Breckenridge and Vincent state:

If we are to make physical education programs useful as well as interesting to children we must help them to enlarge the variety of skills as well as to entertain them by using skills already mastered (14, p. 285).

Program continuity is preserved if there is a level of proficiency established for each of the three grades in junior high school. As the individual grows and develops during the three years of junior high school, his motor performance improves.

As Espenschade points out:

Motor performance is related to age, weight and height during the elementary and junior high school years but shows slight correlation with the body build. Increase in performance of girls seems between seventeen and eighteen years Physiological maturity evidently influences rate increase in both sexes but the nature and extent of this influence has not been determined (37, p. 108).

As in the development of larger muscles and of gross bodily control, the development of the smaller muscles and of fine motor skills proceeds in an orderly pattern. The control of eye muscles and of hands and fingers progress from random, uncontrolled motions of the infant to the finely controlled skills of writing, reading, drawing, and motor performance in the young adult (14, p. 109).

Sociological Foundation

Principle Eight states that program continuity should be provided in order to create the best possible teaching-learning situation.

Children need educational opportunities that will enable them to learn to work together in lifelike situations. The urge to associate, to visit, to whisper, must be satisfied in their daily school experiences. Social learning should constantly widen the appreciation of the rights of others. These insights are of basic importance in a world which is increasingly cooperative and interdependent (111).

Learning experiences in physical education, as in subject matter areas, should be planned so that each one grows out of the preceding level and prepares the pupil for the incidents to follow. Sequence and continuity are based on the fact that children grow in complexity and maturity and they begin with simple manipulations such as block building and sand modeling, proceed to games of low organization, and then finally to team games (32, pp. 36-43).

Cowell and Hazelton state:

Physical education conceived of merely as exercise presents no problems related to some organizing focused around which learning experiences are centered. If, however, physical education is interested in health, growth, nutrition, personal-social relations, and the interests, needs, problems, and concerns of students related to such problems, mere planning for exercise is not enough (25, p. 92).

Many contemporary social problems demand policies for action in diversified social groups and without experience in these situations the modern man's abilities to adjust are taxed. The physical education teacher should be concerned with the individual as a socio-psycho-biological creature, and not see him only as a performer in some competitive sport. He must understand trends and forces in the modern world which become determinants of behavior in the same persons he as a teacher seeks to change by the process of education (25).

In studies by Jack (60, pp. 114-31) and Page (101, pp. 314-25) it was found that children differ in leadership or dominance qualities based upon the skills they possess and varying situations. Their leadership-followership position is ordinarily determined by the successful use of these skills dependent upon the accomplishments of the particular group in which they find themselves working or playing.

As Breckenridge and Vincent point out:

Children are benefitted socially when they learn specific skills which are useful in building self-confidence and prestige with other children. It is not wise as a playground teacher, for example, to force the shy and unskilled boy into a baseball game, where his lack of skill only makes a nuisance of him with the result that the group avoids him still further. Much better is a plan which takes the child off in private and teaches him to throw, catch, hit, and run until he can take a desired place in the game. If he is hopeless as a ball player, he may become a good marble shooter, or swimmer, or diver, or track man, or maybe a good singer in the glee club, or the accompanist for the glee club (14, p. 410).

The assumption that children learn social lessons in free group play without teaching or supervision is apparently false. It would seem that no one person has all the answers all of the time, but rather, depending upon the situation and the activity, the leadership in any group should change from person to person. This would enable those having the greatest skill or knowledge about the situation at the time an opportunity to lead (131).

In order to create the most favorable condition for the learner, he should have reached a physical, mental, and social maturity suited to the activity. His strength, endurance, and muscular development must be able to meet the demands put upon them. He must be intellectually able to perceive the relationships involved in materials and movements and to develop understanding of the purposes of the activity. Social maturing of the individual must have gone far enough to enable him to respond properly to other people and to subordinate himself to the group while participating in motor activities involving social associations as are found in team games. Regardless of the form of communication used by the teacher, the student learns only if he actively perceives, thinks, and plans during the instruction. The instructor should strive to prepare the learner for actions as soon as possible. The procedure for beginning a motor activity should be: first, general remarks concerning the equipment, materials, and

surroundings to acquaint the learner; second, one or two simple demonstrations of the movement with very little verbal direction; third, initial efforts by the learner. The first trial should occur within a few minutes after starting the explanations (95, p. 84).

PRINCIPLE NINE: THE PHYSICAL EDUCATION PROGRAM AND STAFF SHOULD HAVE ADEQUATE ADMINISTRATIVE SUPPORT.

Psychological Foundation

In order for physical education to contribute in full measure, to education, school administrators must lend their whole-hearted support to the program. The importance of physical education in the thinking of the parents, boards of education, pupils, other teachers and the community in general is reflected in the attitude of school administrators. It is often contended that many institutional heads lack sufficient professional preparation and understanding to administer a desirable program. In many schools, the planning of physical education is completely over-shadowed and dominated by competitive sports (36, pp. 81-92).

As Irwin points out:

Without question these criticisms are justifiable in some schools. Often school administrators think only in terms of academic fields and consider physical education a "necessary evil" in the process of child development. Regardless of this situation, however, there has been a marked improvement in the programs throughout the country during the past two or three

decades. From the standpoint of physical education the uninformed and unsympathetic school administrator is now in the minority (59, p. 63).

The concept of physical education activities for everyone has had difficulty in gaining recognition as an essential phase of the curriculum. Gradually the content of the program has been given some emphasis and efforts have been made to adapt it better to the needs of boys and girls. Frequently, organized physical activity is ignored or is casually done in order to fulfill part of the state requirements (36). It is difficult for the program to make much progress unless it is accepted and supported as an integral part of the total school curriculum. The administrator should give the program and staff adequate support. Just as in any other area, a certain amount of space, learning tools, and adequate care of equipment, and facilities are necessary (61).

Homogeneous grouping in physical education makes it possible to render the most valuable contributions to students. Lack of specialized training in how to obtain information for grouping and the administrative problems of scheduling have handicapped the achievement of this goal in many schools (19, pp. 277-81). There are a number of sound reasons for such grouping. The placing of individuals with similar skill, ability, and other factors in the same class equalizes competition. The needs of each student can be better met if those of like capacities and characteristics are placed in the same

period. This arrangement makes for more effective teaching and the instruction can be better adapted to the level of the student. Grouping provides a better learning situation and facilitates progression and continuity. Homogeneity helps protect the child in that it insures his participation with others who are alike in physical characteristics. By being placed in these similar groups, a certain amount of success is assured, opportunities to excel are found, and as a result of this recognition there is a feeling of belonging and of security (17, pp. 73-81).

As Edmondson, Roemer, and Bacon state:

The application of tests and measurements, with attendant individual rating, is no longer unusual or unnecessary in the work of physical education. Segregation of physical education classes according to ability and needs is as important as in academic subjects, if not more so. Individuals' physical differences are often more obvious than mental differences. The need for graded courses and for assignment to classes on the basis of accomplishment has been too generally overlooked (36, pp. 394-95).

The administrator's success as a leader is determined by his ability to direct others successfully toward established goals. It is essential that faith be created in the cooperative enterprise and that each individual experience the achievement of personal ambitions, guided by what is best for the entire group. The structure of the school organization must clearly provide for close relationships in coordinating areas of activity. There must be meetings between the principal and his chief assistants to make arrangements for unity

of effort and to remove obstacles that may retard progress. Progress includes a number of factors which must be considered in their proper perspective (88).

Budgeting is the foundation upon which an efficient administrative organization is built. School costs are usually based on the needs of the community, the resources of the community, and the willingness of the people to support public education (16).

Williams and Brownell contend:

An awakened public consciousness results in better schools with numerous added educational advantages, of which health and physical education are worthy examples Sound administrative practice might suggest the following procedures: (1) analyze the needs and resources of the community upon the basis of all the scientific evidence available; (2) use these data to construct a valid and progressive working plan; (3) execute the plan insofar as possible; (4) evaluate the plan as it develops; (5) modify the plan as the need arises, according to changing conditions; and (6) conduct a continuous and reliable program of public relations throughout the entire process (144, pp. 62-63).

In the budgeting process all areas of particular departments must be considered in terms of their contributions to the over-all educational objectives. The formulation and preparation of the budget is based on reports and information forwarded through the various subdivisions of the institution. The administrator must be aware of the work being done throughout the plant, work that should be done, and the needs of every facet of the organization (80).

In some school systems students are permitted to substitute some other endeavor for the physical education requirement. This practice should be examined closely and actively resisted by all principals. The substitutions are usually not physical education but involve physical exertion and the sometimes uninformed principal interprets this to mean "physical education." The advantages derived from a well organized program are not to be found in the marching band, for example. Those who condone replacement of physical education classes are not aware of the goals of the profession. All teachers should recognize that there is no adequate substitute for a well-planned, well-organized, and well-conducted instruction in this area; just as there is no substitute for the mathematics class (17; 99; 119; 143).

Brownell and Hagman assert:

Administration represents the constructive leadership that enables a program to function effectively in the accomplishment of established and worth-while goals. In administration, authority and responsibility go hand and hand; this means that a person given the responsibility of organizing and conducting a program must have the authority to fulfill his assignment in the most efficient manner (16, pp. 281-82).

Biological Foundation

The program and staff in physical education should have adequate administrative support according to Principle Nine.

Education is beginning to accept and practice the concept involving the development of the whole individual and

is intent upon finding ways to promote richer and fuller living. With increased interest in education, the idea has emerged that the school is concerned with the lives of individuals and not merely maintained to "train the mind" (132). The conditions under which children attend school have definite effects upon them and therefore constitute influences that demand examinations of their healthfulness (144).

It is a vital function of the school principal to recognize that the specialized character of expert service demands integration and coordination. He should seek the services of specialized persons, such as physicians and nurses, to give expert medical and educational aid to the solution of school health problems (88, pp. 73-80). The conditions of the school set-up should be of great concern to principals in giving adequate support to the over-all program and the staff.

Williams and Brownell maintain;

Any arrangement of the school day must be regarded as unhygienic if it overtaxes children either mentally or physically, or if it fails to provide satisfaction by a proper balance between work, play, rest, and the taking of nourishment. This balance depends in part upon the length of the school day, the divisions of the program, the amount of home study, the schedules that children follow, and the provisions for school feeding (144, p. 277).

Administrators should be concerned with establishing the best possible working conditions for all members of the staff.

As Bucher states:

They should receive an adequate salary to eliminate financial worries, be encouraged to develop out-of-school interests in the community, have hobbies in which they can engage after school hours and during vacation periods, and have adequate provisions for sick and sabbatical leaves and leaves of absence so that proper rest and adequate educational standards may be assured. Furthermore, there should be ample opportunities for affiliation with professional groups and the development of cultural and other interests conducive to better leadership qualifications (17, p. 238).

Not only will teachers and leaders have better mental and emotional health as a result of these considerations, but this will also be reflected in the total health of the youngsters with whom they come in contact. In further provision for more effective learning, the principal should recognize that the work of each teacher should provide for release of creative human talents in an associated enterprise. In order to achieve this, personnel should not be thought of as workers turning out a product who performs for the master, but as a group of individuals who are bound together by common interests and purpose in an endeavor (8).

As Edmondson, Roemer, and Bacon maintain:

There is large opportunity for meeting the individual needs of students who are low in vitality, who are underweight or overweight, who offer nutritional problems, who need combinations of certain exercises, and rest periods, who need recreational spirit, or who have postural defects. Because the successful physical education programs bring such significant results, their establishment and prosecution present a real challenge to the educator (36, p. 395).

Sociological Foundations

Principle Nine suggests that the physical education program and staff should have adequate administrative support.

The public schools have an important share in fostering the unique characteristic of American culture, which places the responsibility for his actions squarely upon each individual. The social ends for which the school exists should reflect the characteristic spirit of democracy. This atmosphere cannot exist unless the administrator recognizes and encourages social improvement as a function of the school. He must be the example for the objectives and practices that reflect the democratic way of life (46, p. 103).

Democratic action occurs when the group is seeking goals it has a part in determining. The administrative officer must understand ideals of democracy and continually become more skilled in his work with teachers. These policies should work toward helping teachers understand and apply these principles and methods in their associations with girls and boys. Democratic methods involve the application of values by the individuals as they work together in identifying and solving problems. In today's culture, problem solving provides the fundamental approaches for community living (140, p. 54, p. 85).

Good faith must be shown by the administrator through continued emphasis upon cooperative group processes. The first ideal in democratic leadership is the recognition of the dignity and worth of each individual. The second ideal places

great reliance on the cooperative use of intelligence in the solution of problems common to the group, with the intelligence of each person essential to such cooperation (8, pp. 9-18).

Yaeger maintains:

The achievement of satisfying results through cooperative group action requires a fine adjustment between dynamic educational leadership and the group. The educational leader becomes an integral member of the group as he manifests his leadership. In this way he becomes socially effective as he seeks to develop power through and with his group rather than over them. Thus he may become more effective as a leader as he identifies leadership in others and increases their area of participation, on the theory that to produce initiative and constructive power is to exercise it (149, pp. 420-21).

In his acceptance and practice of these group procedures, the administrator should realize that one department cannot be promoted at the expense of another. Administrative policies should recognize the important place that each area has in the total program (17).

As Edmondson, Roemer, and Bacon point out:

The spirit of American democracy seems a part of the group loyalties and the cooperative efforts necessary to the successful and joyous participation in team games. School administrators will do well not to lose sight of these values (36, p. 402).

The load of the physical education teacher should be as much an administrative concern as that of any other teacher. La Porte's (72, pp. 6-7) study recommends that class instruction per teacher should not exceed five clock hours or the equivalent in class periods per day, or 1500 minutes per week. This maximum should include after-school duties. A

daily load of 200 pupils per teacher is advised, with never more than 250.

The scheduling of physical education classes should be accomplished according to a definite plan.

As Bucher says:

Physical education should not be inserted in the over-all master scheduling plan wherever there is time left over after all the other subjects have been provided for. This important responsibility cannot be handled on a "hit-or-miss" basis since that disregards the interests and needs of the students. Instead, physical education classes should be scheduled first on the master plan, along with such subjects as English and science which are required of all students most of the time they are in school. This allows for progression and for grouping according to the interests and needs of the individual participants (17, p. 312).

All students should be placed in a physical education class without exception. If the child can go to school, he should be enrolled in physical education. Special attention must be given to the exceptional individual in order to insure his being placed in a program suited to his needs (137, pp. 120-29).

An administrative misconception exists generally that operates under the scheme that physical education classes can accommodate more students than academic classes.

Voltmer and Esslinger contend:

Proper class size depends on such factors as space and equipment available, type of activity, degree of classification of pupils for activity, and grade level. Even though there are many modifying factors, certain general conclusions

regarding class size may prove valuable. Generally a class of from thirty to forty pupils is not too large to provide an excellent teaching situation (137, p. 125).

Williams states:

Another obstacle confronting every teacher of physical education is giving guidance to secondary school pupils is the constant, persistent problem of having too many boys or girls in one class. How can an administrator expect the teaching and learning process to be carried out at the highest level when there are seventy-five pupils in one class which meets only two times a week? (143, p. 291).

Scott says:

In order that each student may have the benefit of individual instruction and an opportunity to participate in the games, class size on all educational levels should be restricted to an absolute maximum of forty students, with the optimum for one teacher set at from twenty-five to thirty (119, p. 352).

Oberteuffer concurs with:

How any principal or superintendent can expect a physical education teacher to teach over thirty or thirty-five students a period remains another one of life's mysteries! It simply cannot be done without heading, without using mass activities, or without competent assistance and adequate space. Furthermore, if the "gym" period becomes the dumping ground for any student who is not in study hall or class, the ultimate violation of good sense in scheduling has been committed (99, pp. 233-34).

PRINCIPLE TEN: THE PHYSICAL EDUCATION PROGRAM SHOULD PROVIDE BASIC INSTRUCTION FOR ALL STUDENTS.

Psychological Foundation

Physical education is a phase of education that uses the activities of the program to influence the behavior of students

in order to achieve the objectives of general education. The motor activities around which the total program is constructed are properly classified, graded, selected, and taught so that physical education may make its unique contribution to the general education of all children. Games and sports are never to be considered as ends in themselves, but are the means whereby the pupils acquire educative experiences. In any physical education plan the instruction should be of such a quality that it provides for each student to develop to the fullest extent of his capabilities. In addition to basic teaching for all pupils, opportunities should be offered for the more accelerated ones to participate as members of intramural, extramural, or interscholastic teams. The obligation to the average player must be met with a sound system based on teaching fundamental skills (119, pp. 367-68).

Burton explains the nature of a skill in three phases:

First, teachers in school and industry will be helped greatly if they will regard skills as refinements of meaning and not as isolated mechanisms. Skills are the means for making understandings operative. Skills have no meaning themselves separate from functional situations.

Second, skills are not precise, fixed routines to be achieved through unthinking repetition It varies from person to person Skills must also be developed for use in varying situations and positions.

Third, the acquisition of a skill has two phases: (a) the integrative phase in which perception of the process and meanings are developed; and (b) the refining or facilitating phase in which precision is developed (19, pp. 557-58).

A person's skill in a given performance is his present effectiveness in terms of the results he achieves. Among the factors which contribute to skill are speed, precision, strength, and timing. The definition of a skill may also imply that of two persons who attain the same results, the one who does so with the least expenditure of energy is the more skillful. Acquisition of skill in movement situations requires extended practice. Experimental studies have shown that for motor-skill learning short practice periods are more economical in time than are long ones (68, pp. 307-69).

As Griffith points out:

It is probable that teachers tend to make practice periods too long rather than too short. While a person may engage in an activity for recreation for a long period, the time used specifically for learning should be divided into short periods (43, pp. 91-3).

Ragsdale states:

Where the skill learning is only a small part of the total study activity involving much thinking and planning, the learning period can certainly be much longer. By properly working for all the varied objectives of school subjects, sufficient variety may be introduced into the usual high school class period of 40-60 minutes so that it can be used effectively by all teachers, but the part given to motor skill training should rarely exceed half the total time.

The best frequency of practice periods has been investigated extensively. The findings are simply stated. Twice daily, and three times weekly, are good arrangements. Once a week is probably not quite often enough (109, p. 85).

The motor learning process is an active and thoughtful one. The learner may observe a demonstration thoughtfully

and learn from it without copying it exactly. He initiates action as a beginner, makes errors and thinks about the relationships between his actions and the results obtained; he further attempts to reach the goal through repeated performances and tries to judge whether improvement in the act can be noticed. If he is unable to discern the contributing factors of his repeated failures, or lack of improvement, learning is slow. The teacher can aid the pupil by helping him develop understanding. This not only involves verbalization but also is related to action. Insight, growing out of action and reapplied in action, is an important factor in the successful performance of motor activities (68, pp. 303-21).

From his first observation the student obtains a crude image of the general pattern of the movement, but details go unnoticed. A limited amount of discussion may direct his attention to the essential aspects of the performance. These comments should not be too detailed. The initial step of the motor-learning process is one of thinking through the operation in relation to data already received from suggestions. This beginning phase should result very soon in the first trial. In successive attempts students are guided constantly by reflective thinking and stimulated further through observation, discussion, and explanation. The teacher should remember that understanding develops slowly, that involved interpretations, especially at the outset, have little if any value. The instructor's function is that of directing

attention to the necessary parts of the movement and introducing detail sparingly as progress is made (53, pp. 299-329).

Ragsdale declares:

In general, fineness of analysis and practice on detail should come late in the learning process; early learning should be concerned with complete meaningful units (109, p. 86).

In regard to the acquisition and refinement of skills, the emphasis here as in all teaching, should be upon diagnostic learning. Once the general purpose and work methods of an activity have been explained and demonstrated, instruction should concentrate upon the detection and elimination of the particular difficulties of each individual. One of the reasons that many psychological tests show so little influence of practice is that the practice is usually not enlightened by seeing that it is pertinent to the particular difficulty which each person is having at each stage of learning (19, pp. 640-55).

There are many ways in which a learner can be helped to improve upon his technique. Simply to provide a child with facilities, equipment, and opportunity to try his hand at various kinds of activities is likely to be helpful. However, even under these circumstances, a child may fail to realize his potentialities. The provision of direct aid of another child, or an adult, may expedite an individual's progress (41, pp. 31-37). An adult can speed a child's learning through instruction that is suited to the child's level of

ability, this not only helps to accelerate the learning process but also prevents the establishment of inefficient ways of performing. The added mastery, thus attained, is likely to add to the person's enjoyment of the game or sport. In all motor performances a pupil may profit from analysis without necessarily losing spontaneity or creativeness. In the learner, adult or child, there often is a discrepancy between what a person is trying to do and what, through lack of technique, he is able to do (83, pp. 167-68). Quite as important is the aid that a child may get from adults in finding a proper challenge to his growing motor abilities. Even if sufficient facilities and equipment are provided, the average youngster may reach a point at which his efforts are made up of repetitious performance of what he has already accomplished. Through wise leadership the child could be helped to discover new possibilities in the environment and to acquire a larger repertoire of skills (103, p. 32).

Gates avers:

It is apparent that there is no one curve of learning. The particular form of the curve depends upon many factors such as the nature of the skill, the maturity of the learner, the distribution of his practice, and the extent of his practice in related activities. Learning a motor skill is not just learning to do a given act faster. It involves periodic integration of responses into more complex patterns. Plateaus in learning curves are sometimes periods of preparation for a higher integration, sometimes delays due to inappropriate habits, fatigue and the like. Throughout all learning, short-time

fluctuations in efficiency are the rule. From a study of the characteristics of learning curves the alert teacher may obtain suggestions for the appropriate guidance of learning (41, p. 362).

The competence of adolescent boys develops consistently throughout this growth period, but the teacher should remember that there are wide variations of physical maturation within the group and there are, consequently, large differences in skills. Physical education programs that are stereotyped may place some youngsters under a strain while failing to challenge others. The proficiency of a particular person at a given time may change rapidly and his achievements may be quite different at the end of the semester than they were at the beginning (147, pp. 75-77).

Breckenridge and Vincent propose:

Great flexibility of physical education programs should exist, allowing for much individual variation in level of skill at any one time, and also providing for each individual to change his participation as his abilities change even if this change must be made within any given semester's program. In any highly organized team sport, or in activities requiring highly developed individual skills, care should be taken to classify participants according to their skill so that a maximum of satisfaction may be obtained by the young people (14, p. 304).

It would appear from the previous statements that learning will best take place under certain factors and conditions. The physical educator should make certain that the student has a clear picture of the performance expected. Teachers should constantly seek the best methods in respect to skill

teaching because the movement involved will be learned better, time will be saved, and the individual will have a richer educational experience.

Biological Foundation

Principle Ten states that the physical education program should provide basic instruction for all students.

There is a final physiological limit beyond which the human organism cannot go in speed, strength, endurance and accuracy of performance. This limit is approached by very few people in any except very simple endeavors (109, p. 79). Within the past fifty years the world's record for the high jump and pole vault have increased markedly. This height increase is not due to better performers or more practice but to improvement in the methods employed in the performance of these specialized events.

An individual learning on his own without instruction, may reach a rather high level of achievement. If aid is received in the form of instruction, the same person learns a better method and consequently increases his efficiency. A basic system of instruction in physical education would be conducted with the awareness of the physiological limits of every student. The aim of such a project should be to help each person in it attain, as near as possible, the limits of his particular ability (32, pp. 86-92).

Everyone has his characteristic manner of performing regardless of the type of movement involved. A certain performer does not necessarily copy the actions of another for this reason. In the execution of a motor movement, there are good and bad forms but there is not usually any one best way. The pitcher in baseball uses motions and executes certain actions in his delivery of the ball to the plate; while these movements are similar in all pitchers, each individual pitcher has his peculiar motions not found in all others.

Ragsdale stresses:

The human body as a biophysical organism acts within certain limits of force, range, speed, and other human functioning. Within these limits, however, there may be a large number of equally good forms and the effort to find and teach the one best form for a given motor activity is futile. Work and play activities are complex, requiring a nice adjustment of each part-activity to the whole movement pattern. When internal organization is good, there is smoothness, grace, rhythm, and ease of action growing out of the fact that energy release, timing, movement through space, and return to a state of equilibrium are properly related to one another (109, p. 71).

Industrial "time and motion" studies and the development of modern athletics indicate that more efficient methods of performing old tasks are possible.

It is necessary to understand the entire growth cycle in order to comprehend a particular stage of development. Children do not grow and develop according to a set pattern. At any given age level an observer may witness behavior in any age group that may be immature for that age. Awareness

of these characteristics of this earlier growth period will better enable the teacher to help lagging children to catch up. These same attitudes toward growth are necessary in order to help children make a smooth transition from present to future growth stages (42, pp. 23-37). The slow pupil in physical education may be having difficulty acquiring a certain skill because his rate of maturation has left him behind his age mates.

Sociological Foundation

In Principle Ten the necessity for physical education programs to provide basic instruction for all students is pointed out.

The socially valuable features of play activities have been previously mentioned, based upon outcomes in terms of group and individual behaviors. The program of physical education should provide basic instruction for all students in the fundamental skills of the various games and sports since motor performance is recognized as an important basis for peer status. Since proficiency in ordinary motor-coordinations, such as posture, walking, and running, as well as special athletic and artistic skills can be very important in the personal and social progress of an adolescent, it would seem worthwhile to make more careful provisions for instruction in these fields.

In agreement with this statement, Cowell further states:

In games and sports the child learns to control his body with fine nerve-muscle coordinations. He becomes more skilled and graceful. In the same situations and in similar manner he learns to be less clumsy in social relationships. He is more skilled and socially graceful in dealing with other personalities (27, p. 154).

Teachers should not assume that every individual is capable of developing a high degree of skill in all types of games and sports. However, there should be adequate provision which will encourage those who have initial difficulties in developing at least enough to be able to take an active part in the activities of the group (47).

Gates declares:

This does not mean, of course, that every child must be a robust athlete to achieve normal social adjustment, for some children who are lacking in motor ability gain acceptance and satisfying social contacts by other means, especially if they are bright or have other outstanding talents. In the case of the usual child, however, the acquisition of motor skills is of value not only from the point of view of the personal satisfactions that accrue from competence in self-help and independence of adult aid, but also from the points of view of good social and emotional relations with other children (41, p. 76).

Oberteuffer affirms:

The boy or girl who is less well coordinated, less skillful, less interested, must not be forsaken or treated with less zeal than the great athletic performer. The need for the personal gains which physical education affords is present among the poor in ability. They yearn for success--are pleased by it. They seek status through accomplishment. They enjoy recreational activities.

They need what physical education has to offer; therefore, their opportunity for instruction must be equal to any other (99, p. 213).

Summary

In this chapter a brief account of the development of the junior high schools was given. One of the early major developments involved the reorganization of upper-elementary and secondary education, which resulted in closer articulation between the elementary and secondary schools. The first junior high schools were established about 1910. There was a rapid increase in the number of schools from the beginning up to 1930. There appear to be various factors which have had considerable influence on the acceptance of the junior high school. These factors include increasing enrollments, density of population, and various regional influences.

Early physical education programs were patterned after formal activities that were adopted in Europe. This resulted in a formalized program of "physical training." Williams was responsible for initial efforts to provide a program composed of a wide variety of activities. This concept opposed the existing theory of a narrow offering that involved only gymnastics. Tremendous progress was made after World War I in curriculum offerings. Probably the most important of these was the professional curriculum offered by universities and colleges, which provided better trained leadership in the field. The program of physical education from 1930 to date

includes considerable diversity in the activities offered at all levels. Many schools have developed physical fitness tests in order to evaluate the ability of youth to meet the daily demands of living.

The bases for principles of physical education were established in psychology, biology, and sociology. Psychology is defined as the observation and interpretation of those adjustments of the human organism to changing environment. The use of the word biology has been used to explain how human beings function; while sociology refers to the study of human beings living together in groups. Principles are based upon scientific facts, and have been defined as fundamental truths which guide action toward the solution of problems.

From a thorough investigation of the literature, ten principles of physical education were constructed. Each of these principles was documented in reliable sources of data from the fields of psychology, biology, and sociology. Each principle represents desirable practice in physical education based upon the accepted theories of qualified persons in the field. These stated principles form the components of the evaluating instrument developed for this study.

The following ten principles are the main headings of the evaluating instrument constructed as half of the dual purpose of this study.

One. The physical education program should offer a wide variety of activities with opportunities to acquire a number of motor skills.

Two. The physical education program should be considered an integral part of the total education effort of the school.

Three. The physical education program should serve all pupils, giving adequate opportunity to those who need physical education most.

Four. The physical education program should be conceived and conducted with an awareness of the unitary nature of man.

Five. There should be a course of study in physical education which is educationally sound, based upon the interests, needs, purposes, and capacities of the youth it serves.

Six. The physical education program should be designed to combat sedentary living and promote physical fitness.

Seven. The physical education program should develop physical education possibilities by encouraging wise use of leisure time and by supplementing community facilities for joint recreational purposes.

Eight. Physical education program continuity should be provided in order to create the best possible teaching-learning situation.

Nine. The physical education program and staff should have adequate administrative support.

Ten. The physical education program should provide basic instruction for all students.

In Chapter III the construction of the evaluative instrument will be explained, along with the procedures in the development of the final form. A typical interview will be reviewed that will indicate the method employed in gathering the data.

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CHAPTER III

THE EVALUATION INSTRUMENT

Introduction

Once the principles of physical education that applied primarily to the junior high school were determined, it was necessary to develop an instrument that would encompass these principles and at the same time be functional. The purpose for which the instrument was designed was to determine, by an impartial method, the standards and values of the physical education program taught in each school. The instrument would also provide a means of comparing the relative effectiveness of the programs offered by schools in a particular geographical area. The evaluative instrument would need to be constructed in such a manner that someone in a particular school could use it for self-evaluation. In addition, the scale would need to be definitive enough to clearly indicate the strengths and weaknesses of the total program.

In the development of the instrument several steps which appeared pertinent to the problem were considered: first, the instrument itself would need to be one that could be readily administered; second, the system for scoring had to be simple and answers had to be readily seen; third, a method had to be devised which would minimize the "halo" effect of the person.

Persons answering the questions would need to realize that only through a sincere effort to supply actual information could worthwhile program improvement be made; fourth, the data collected as a result of the interview would then need to be converted into some kind of numerical score that could be used to indicate the relative merit of a particular school in regard to its program of physical education; fifth, through a comparison of this score to the established standard of excellence, the areas in which a certain school was weak would show up and the place for improvement would be readily discernible.

Construction of the Original Instrument

An extensive study of literature in the physical education field as discussed in the preceding chapter, revealed a lengthy list of practices and policies pertaining to physical education programs.

Tabulations were made to determine which items were most frequently used.. This resulted in a list of 135 major headings. Initially, the items were reviewed for repetition and subheadings not directly connected with the activity program. Some items were combined and others were eliminated. From these efforts emerged an instrument that was divided into several sections and under two separate parts. These sections included: Part I--"A Program Offering a Wide Variety of Activities,"; Part II--"Purposes," "Administration," "Equipment and Facilities," and "Instructional, " which have been included

with subdivisions of "Curriculum," "Methods," and "Class Organization."

Part I, dealing with "A Program Offering a Wide Variety of Activities," was divided into eight parts. The first was labelled "Sports Activities" and included baseball, basketball, dodge ball, soccer, softball, speedball, touch football, track and field, volleyball, and "others." "Individual Activities" consisted of archery, badminton, boxing, golf, horseshoes, paddle tennis, table tennis, tennis, tumbling and wrestling. Listed under "Self Testing Activities" were stunts, dash for time, high jump, broad jump, pull ups, chin ups, push ups, and "others." "Dance" included social, square, and other folk dances. "Adapted Activities" included table tennis, swimming, horseshoes, and "others." "Co-educational Activities" were volleyball, swimming, tennis, badminton, and "others." "Aquatics" included swimming, diving, water safety instruction, boat handling; and the last section, "Miscellaneous," listed bait casting, fly casting, spinning, handling of firearms, and "others."

The columns of Part I were headed as follows:

Taught in--seventh, eight, ninth.

Semester--first, second.

Time Allotment--three, six, nine, twelve.

Outdoor Areas Marked and Used--How many?

Indoor Facilities.

Comments.

The teachers were asked to check the appropriate columns for every item, or to indicate which was the correct one for marking.

Part II, "Purposes," was concerned with the philosophy, principles and objectives upon which the program was based. Each item was to be scored by circling the number which represented the degree to which the actual condition existed in that particular school. In the numbering scale, zero was low and five was high.

0.--Non existent

1.--Recognized and is practiced occasionally

2.--Plan formulated and followed where and when possible

3.--Plans completed and followed to some degree

4.--Concept exists and practiced most of the time;

effort made to improve

5.--Clearly defined and definitely practiced; an established procedure.

Under this heading, "Purposes," there were twenty-one items which were to be evaluated using the above scale.

Section 2, "Administration" encompassed staff, programing, budgeting, and class grouping and the same method for scoring was used as that in the previous section. There were twenty-four items included in this section.

Section 3, "Equipment and Facilities" requested additional information to that obtained in Part I with the same numbering scale being used. This part consisted of twenty-three items.

Section 4, "Instructional" dealt with the instructional phase of the total activity program and was divided into three sub-topics, curriculum (thirty-one items), methods (twenty-four items), and class organization (twelve items). The same numbering scale used previously was also employed here.

This evaluative instrument, having been administered in three schools, proved too bulky and would have taken too long to administer and also would have consumed too much time to score. In addition to similarity of items, there were points not directly associated with the physical education programs as originally stated. After reviewing the original draft, a second instrument was constructed which was changed both in context and form, but was still in an experimental stage (see appendix).

Evaluating Instrument--First Revision

The divisions by parts were eliminated and through combination of these parts, ten principles were established. Part I was changed to Principle One and the same arrangement for the activities was maintained. The numbering scale was still evaluated with zero as low and five as high, but the explanations of each number were changed to read as follows:

- 0.--All aspects unsatisfactory
- 1.--Nearly all aspects unsatisfactory
- 2.--More aspects unsatisfactory than satisfactory

3.--More aspects satisfactory than unsatisfactory

4.--Nearly all aspects satisfactory

5.--All aspects satisfactory.

In the body of the instrument, after dealing with Principle One, there were nine major items or principles that were concerned with the philosophy, principles, and objectives upon which the physical education program is based. The value of the numbered items represent the degree to which the school meets that condition, based upon the circled "Yes" or "No" questions. The items in the scale attempt to find out to what degree a particular school meets the accepted principles of physical education. Under each principle there were questions with numerous items to be checked, as well as items with a "Yes" or "No" answer. This instrument was studied and reviewed and a completely new format was devised for the evaluation instrument, which was eventually incorporated in the draft used for the trial study.

Evaluating Instrument--Trail Study

The instrument was divided into ten categories encompassing ten basic principles discussed in detail in Chapter II. Only those items that could be adequately documented from the fields of psychology, biology and sociology were used. The principles were evaluated on the same numbering scale as that used in the first revision. However, under each principle, there was a list of ten subdivisions which were to be

answered with a "Yes" or "No". There were also several items which were to be answered with a check mark. These questions were designed to support that particular principle and to indicate the degree to which that practice of a particular school met the principle.

Principle One was, "A Program Offering a Wide Variety of Activities," and under this heading seven categories were listed. Each category included a number of activities pertaining to that particular grouping. Under the heading of "Sports" the following activities were listed: baseball, basketball, dodge ball, soccer, softball, speedball, touch football, track and field, and volleyball. "Individual Activities" included: badminton, boxing, horseshoes, paddle tennis, tumbling, and wrestling. "Self Testing Activities" included calisthenics; under "Dance" there was either social or square; "Aquatics" included swimming, diving, and water safety instruction. Finally, there were headings for "Adapted," "Co-educational," and Miscellaneous." Spaces were left under these last three headings. The columns were divided as follows:

Grade Taught--seventh, eighth, ninth

Semester--first, second

Time Allotment--(weeks) three, six, nine, twelve

Number of Areas Marked--out, in

Teacher's Evaluation of Activities--Above Average,

Below Average, Average

Future Plans for Improving Program--No Changes, Plan to Add to Program, Plan to Drop.

Principle Two in the Trial Study instrument was worded, "A concept of physical education should exist within the school that associates physical education with the broad aspects of education and in itself contributes to the education of the child." This was evaluated on the numbering scale 0-5 and also by check marks. The ten items under this principle were arranged to be answered as follows:

- a. Which of the following concepts is believed and practiced by the physical education teachers of this school?

Physical education is education of the physical. ___

Physical education is education through the physical. ___

- | | | |
|--|-----|----|
| b. Is the activity program conducted in order to promote confidence in the learner? | YES | NO |
| c. Is a sufficient practice period provided for each boy in every learning situation? | YES | NO |
| d. Does a system of grading exist in physical education that conforms to the school policy for evaluating pupil performance? | YES | NO |
| e. Are performance tests given each student as a part of the regular teaching procedure? | YES | NO |
| f. Is the teaching conducted with an awareness of the teacher-pupil relationship? | YES | NO |
| g. Is the physical education teacher available during each class meeting to help students with their problems? | YES | NO |
| h. Does this program attempt to develop students through self-discipline and self-direction? | YES | NO |

- i. Upon which of the following is the physical education grade based?

Participation _____
 Attendance _____
 Proficiency _____
 Attitude _____
 Skill _____

- j. For introducing a new activity, which of the following is done?

a film of the activity is shown _____
 a demonstration game by skilled players is presented _____
 instruction started in fundamental skills without either of the above _____

Principle Three in the trial instrument stated, "The physical education program should serve all pupils, giving adequate opportunity to those who need physical education most, and added provisions for those with superior skill and exceptional physique." This was measured by the numbering scale and the ten items under this heading were as follows:

- | | | |
|--|-----|----|
| a. Does this school require a physical examination before the student can participate in physical education? | YES | NO |
| b. If a student has a medical excuse from physical education, is the physician required to list and sign those activities in which that student can participate? | YES | NO |
| c. Are the over-all facilities satisfactory? | YES | NO |

Most urgent needs:

1. _____

2. _____

- d. Is there equitable scheduling of facilities for both girls' and boys' activity classes? YES NO
- e. Does this school have a swimming pool? YES NO
- Size of pool X
- f. Does this school have a gymnasium? YES NO
- g. Are the dressing rooms adequate; providing sufficient space for the student's clothes? YES NO
- h. Does this school have shower rooms with sufficient shower heads to handle peak loads? YES NO
- i. Have all necessary safety precautions been supplied for the play area? YES NO
- j. Are outdoor play areas readily accessible? YES NO

Principle Four read, "The physical education program should be conceived and conducted with an awareness of the unitary nature of man, based upon the belief that physical development is related to mental and social development."

The ten items were:

- a. Is instruction given on how to mark off the various playing areas? YES NO
- b. Are students given consumer education in sporting goods? YES NO
- c. Is there instruction on "how to be a good spectator"? YES NO
- d. Are strategies of offense and defense taught as a part of each activity? YES NO
- e. Are the rules and regulations of the various games required learning for all boys in the program? YES NO

- f. Is an effort made to broaden the concept of physical education to include the various social experiences and not merely emphasize physical exertion? YES NO
- g. Are discussions conducted with students on "How to behave" at a game? YES NO
- h. Is some instruction given on how leagues are organized, how tournaments are set up, or how governing bodies of sports are established? YES NO
- i. Is health information relative to the activity program included in the instruction? YES NO
- j. Are the boys in the program given opportunity to understand some of the outcomes of competition, such as: how to win graciously; to lose is not a disgrace; or not to take unfair advantage of an opponent? YES NO

Principle Five stated, "There should be a course of study in physical education which is educationally sound and planned to meet the growth and developmental needs of this age group." The ten parts under this principle were:

- a. Is a detailed course of study available for each of the grades? YES NO
- b. Does the course of study contain general and specific objectives to be reached at each grade level? YES NO
- c. Are the activities divided into units with a suggested procedure to follow for each unit? YES NO
- d. Are the social adjustments necessary in various games, by adhering to the rules, emphasized as a part of the instruction? YES NO
- e. Is daily participation in the activity program required of all boys? YES NO
- f. Does the activity program have definite steps of progression for each of the three grades? YES NO

- | | |
|--|-----------|
| g. Is a level of proficiency established for each grade? | YES NO |
| h. Does this school require a costume as a prerequisite for participation in the activity program? | YES NO |
| i. Must all uniforms be alike? | YES NO |
| j. Is all equipment kept in good repair, or replaced in order to insure maximum efficiency and safety? | YES NO |

Principle Six was stated as follows: "Physical education should be taught and used as a means for helping people combat the sedentary living of the present day." The supporting questions were:

- | | |
|--|-----------|
| a. Are students helped to understand the principle of exercise that the body reaches and maintains maximum development through continued exercise? | YES NO |
| b. Are the students encouraged to participate in the activities taught during class in after school hours? | YES NO |
| c. Do the students have opportunities to practice the skills learned in the physical education classes in an organized intramural program? | YES NO |

D. Is the intramural program conducted:

before school	_____
during physical education class	_____
noon	_____
after school	_____
no program	_____

- | | |
|---|-----------|
| e. Are co-educational activities included in the program? | YES NO |
| f. Does the school provide facilities and equipment for community recreational use? | YES NO |

- | | | | |
|----|--|-----|----|
| g. | Do community members use the facilities and equipment? | YES | NO |
| h. | Is there an organized summer recreation program conducted by this school? | YES | NO |
| i. | Does the city recreation department share the cost of operating the summer recreation program? | YES | NO |
| j. | Is having fun through wholesome play encouraged as an outcome of physical education? | YES | NO |

Principle Seven stated, "The physical education program should meet the biological needs of young people for vigorous activities, with sufficient time allotment, and instruction in skills."

- | | | | |
|---------|--|-----|----|
| a. | Are provisions made in the program for strengthening certain muscles as a part of maintaining good physical condition? i.e. strengthening abdominal muscles or the shoulder girth. | YES | NO |
| t
b. | Are students taught that muscular activity is important for the proper functioning of the organs? | YES | NO |
| c. | Are the fundamental movements included as part of the teaching in the various activities? | YES | NO |
| d. | Is good posture positively encouraged? | YES | NO |
| e. | Are boys taught the correct way to run? | YES | NO |
| f. | Are boys taught the necessity of relaxation in relation to physical activity? | YES | NO |
| g. | Are the activities included in the program suited to the needs and developmental characteristics of this age level? | YES | NO |
| h. | Does the program aid boys in understanding their growth patterns, i.e. lack of height or excessive weight? | YES | NO |

- | | | |
|--|-----|----|
| i. Is proper foot position in walking and in other movements a part of the teaching? | YES | NO |
| j. Are boys taught that for developmental purposes, they need more exercise than can be included in one physical education period per day? | YES | NO |

Principle Eight was presented in the following manner:

"The physical education program should take into consideration program continuity through classification of pupils, provision for individual differences, and like interests and abilities, with the ten items as follows:

- | | | |
|---|-----|----|
| a. Are the classes divided by half grades, i.e. all low sevens in the same period, etc.? | YES | NO |
| b. Are the classes divided in full grades, all seventh together, etc.? | YES | NO |
| c. Are the classes in physical education limited to a specific number? | YES | NO |
| d. Are standardized tests used to measure motor ability? | YES | NO |
| e. Are the activities taught in such a manner that will enable each student to progress at his own rate? | YES | NO |
| f. Is provision made during the instructional phase to aid each boy to develop skill equal to his level of ability? | YES | NO |
| g. Do the students have an opportunity to practice skills learned in physical education during class time? | YES | NO |
| h. Is there an established system for making up absences from the physical education class? | YES | NO |
| i. Are cumulative records compiled and used from the results of the physical examination? | YES | NO |
| j. Are students made aware of the objectives for which the teacher is striving? | YES | NO |

Principle Nine states that, "The administrator should give the staff and physical education program adequate support. The supporting questions were:

- a. Does this school have an annual budget prepared on the basis of careful inventory with the complete needs of the activity program considered? YES NO
- b. Is the physical education budget adequate? YES NO
- c. Is the physical education teacher designated as the responsible coordinator of the activity program? YES NO
- d. Is there an equitable distribution of funds between the different phases of the total program? YES NO
- e. Do all physical education teachers have coaching duties? YES NO

Number of men physical
education teachers
in building _____

Number having coaching
duties _____

Number not having
coaching duties _____

- f. Are periods taken from the physical education class for health education? YES NO
How many periods per
week? _____

- g. Is the custodial service adequate in maintaining desirable healthful conditions in and around physical education plant? YES NO

- h. Are other activities substituted for physical education? YES NO

Band _____
Marching Band _____
Other: Please list _____

1. Does the physical education teacher have an established policy for "temporary" excuses?

YES NO

Note from home
 Discretion of physical
 education teacher.
 Teacher and student
 decide together
 Student strongly
 urged to dress at
 all times
 Doctor's excuse.

- j. Is the physical education activity program integrated with the educational program of the school so that the administrators, teachers, and coaches share a mutual responsibility?

YES NO

Principle Ten read, "The physical education program should provide basic instruction in activities for all students." The ten questions listed were as follows:

- a. Is instruction in the fundamental skills given for all activities in the program?

YES NO

- b. Does the teacher move from teaching station to teaching station, giving individual instruction?

YES NO

- c. Are student leaders (assistants) used for demonstration purposes?

YES NO

- d. Are students in a particular class given individual attention and instruction dependent upon their level of ability?

YES NO

- e. Are the relationships between various fundamental skills, with the necessary modifications, included in the teaching? i.e. throwing in baseball; throwing (passing) in football; guarding in basketball, using the shuffle step-together-step related to the basic two-step as used in social dance?

YES NO

- f. Are the students divided into small groups and supplied with sufficient equipment to practice the skill being taught?

YES NO

- g. Does this school have a sufficient variety of equipment and facilities to make possible a well-rounded program of activities? YES NO
- h. Are daily lesson plans used by the physical education teacher? YES NO
- i. Is full use made of the playground area? YES NO
- j. Are play situations employed to teach respect for properly appointed authority? YES NO

Does this school furnish:

towels	YES	NO
soap	YES	NO
shorts	YES	NO
shirts	YES	NO
socks	YES	NO
strap	YES	NO
Is a charge made?	YES	NO

How much\$_____

The Trial Study, which was conducted in five junior high schools, indicated that the instrument was much too long in administering (1½ hours) and also pointed out the necessity for rewording some of the questions. The revised instrument, used in ten different junior high schools of the Pilot Study, was administered in forty-five minutes, the wording was clear and the entire instrument proved workable (Appendix).

Evaluating Instrument--Final Draft

The revised and final draft of the evaluating instrument was used in the Pilot Study. Principle One was changed to read "A program offering a wide variety of activities, with opportunities for acquiring a number of motor skills."

The title of the first column was modified to read: "In Program but not Taught," since it was found in the trial study that a number of activities were included in the program, but there was no instruction in the fundamental skills. The second column was changed to indicate in which grade the activities were actually taught. The Trial Study showed that some schools taught fundamental skills in the seventh grade but not in the eighth or ninth grades.

During the Trial Study, a sufficient number of interviewees objected to the original statement of Principle Two which necessitated the rewording of the principle in order to make the intent of the question clear. In the revised form Principle Two states, "The physical education program should be considered an integral part of the total educational effort of the school." The subdivided items were reduced to eight with some of them reworded and others deleted or put into that category to which they were more nearly applicable. The revised questions were as follows:

- | | | |
|--|-----|----|
| a. Is the following concept believed and practiced by the physical education teachers of this school? Physical Education is education through the physical | YES | NO |
| b. Does a system of grading exist in physical education that conforms to the school policy for evaluating pupil performance? | YES | NO |
| c. Does this program attempt to develop students through self-discipline and self-direction? | YES | NO |

- | | | |
|---|-----|----|
| d. Is there an established system for making up absences from the physical education class? | YES | NO |
| e. Does the physical education teacher have an established policy for "temporary" or daily excuses? | YES | NO |
| f. Are play situations employed to teach respect for properly appointed authority? | YES | NO |
| g. Are performance tests given each student as a part of the regular teaching procedure? | YES | NO |
| h. Is the activity program conducted in order to promote confidence in the learner? | YES | NO |

The revised form of Principle Three reads, "The physical education program should serve all pupils, giving adequate opportunity to those who need physical education most." Two of the ten questions were eliminated, and the eight considered important were:

- | | | |
|---|-----|----|
| a. Does this school require a medical examination before the student can participate in the activity class? | YES | NO |
| b. If a student has a medical excuse from physical education, is the physician required to list and sign those activities in which the student can participate? | YES | NO |
| c. Does this school have a sufficient variety of equipment and facilities to make possible a well-rounded program of activities? | YES | NO |
| d. Is full use made of the playground area for the activity classes? | YES | NO |
| e. Is there equitable scheduling of facilities for both boys' and girls' activity classes? | YES | NO |
| f. Are the dressing rooms adequate, providing sufficient space for student's clothing? | YES | NO |

g. Does this school have shower rooms with sufficient shower heads to handle peak class loads? YES NO

h. Have all necessary safety precautions been supplied for the play areas? YES NO

Principle Four was rephrased in an effort to eliminate the confusing ambiguity of the last part. It now states, "The physical education program should be conceived and conducted with an awareness of the unitary nature of man." The eight supporting questions were:

a. Is an effort made to broaden the concept of physical education to include the various social experiences and not merely emphasize physical exertion? YES NO

b. Are the social adjustments necessary in various games, by adhering to the rules, included as a part of the instruction? YES NO

c. Is health information relative to the activity program a part of the instruction? YES NO

d. Are the boys in the program given opportunities to understand some of the outcomes of competition, such as: how to win graciously; to lose is not a disgrace; or not to take unfair advantage of an opponent? YES NO

e. Are discussions conducted with students on "How to behave at a game?" YES NO

f. Are students given consumer education in sporting goods? YES NO

g. Is "How to be a good spectator" a phase of the teaching? YES NO

h. Are strategies of offense and defense taught as a part of each activity? YES NO

In order to provide a more easily interpreted statement, Principle Five was revised to read, "A course of study should

exist in physical education that is educationally sound, based upon the interests, needs, purposes and capacities of the youth it serves." The eight items upon which the degree of meeting this principle was based are:

- | | | |
|--|-----|----|
| a. Is a detailed course of study available for each of the three grades? | YES | NO |
| b. Does the course of study contain general and specific objectives to be reached at each grade level? | YES | NO |
| c. Are the activities divided into units with a suggested procedure to follow for each unit? | YES | NO |
| d. Are the activities included in the program suited to the needs and developmental characteristics of this age level? | YES | NO |
| e. Are the activities taught in a manner that will enable each student to progress at his own rate? | YES | NO |
| f. Are students made aware of the objectives for which the teacher is striving? | YES | NO |
| g. Does the program aid boys in understanding their growth patterns, i.e. lack of height or excessive weight? | YES | NO |
| h. Is the teaching conducted with an awareness of the teacher-pupil relationship? | YES | NO |

In view of the increased interest in physical fitness expressed by the teachers interviewed in the Trial Study and since the question implies physical fitness, the wording of Principle Six was changed as follows: "The physical education program should be designed to combat sedentary living and promote physical fitness." The eight supporting questions were:

- | | | |
|---|-----|----|
| a. Are provisions made in the program for strengthening certain muscles as a part of maintaining good physical condition? i.e. strengthening abdominal muscles or the shoulder girth? | YES | NO |
| b. Are students taught that muscular activity is necessary for the proper functioning of the organs? | YES | NO |
| c. Are boys taught that for development purposes, they need more exercise than can be included in any one physical education period per day? | YES | NO |
| d. Are proper body mechanics taught? | YES | NO |
| e. Are students helped to understand the principle of exercise that the body reaches and maintains maximum development through continued exercise? | YES | NO |
| f. Is good posture positively encouraged? | YES | NO |
| g. Are boys taught the necessity of relaxation in relation to physical activity? | YES | NO |
| h. Are boys taught the correct way to run? | YES | NO |

The original statement of Principle Seven proved to be repetitious and thus it was reworded to state, "The physical education program should develop physical education possibilities by encouraging wise use of leisure time and supplementing community facilities for joint recreational purposes."

The eight items under this principle were:

- | | | |
|--|-----|----|
| a. Are the students encouraged to participate in the activities taught during class in after-school hours? | YES | NO |
| b. Does the school provide facilities and equipment for community recreational use? | YES | NO |
| c. Do community members use the facilities and equipment? | YES | NO |

- d. Is there an organized summer recreation program conducted in this school? YES NO
- e. Is having fun through wholesome play encouraged as an outcome of physical education? YES NO
- f. Do the students have opportunities to practice the skills learned in the activity classes in an organized intramural program? YES NO
- g. Is the intramural program conducted after school? YES NO
- h. Are co-educational activities included in the program? YES NO

For more concise meaning, Principle Eight was restated as "Physical education program continuity should be provided in order to create the best possible teaching-learning situation." The eight items were:

- a. Are the classes divided by half grades, i.e. all low sevens in the same period, etc.? YES NO
- b. Does the activity program have definite steps of progression for each of the three grades? YES NO
- c. Is a sufficient practice period provided for each boy in every learning situation? YES NO
- d. Are students in a particular class given individual attention and instruction dependent upon their level of ability? YES NO
- e. Are the relationships between various fundamental skills, with the necessary modifications, included in the teaching? i.e. throwing baseball; throwing (passing) in football; guarding in basketball; using the shuffle step-together-step related to the basic two-step as used in social dance? YES NO
- f. Is a level of proficiency established for each grade? YES NO

- | | |
|--|--------|
| g. Are standardized tests used to measure motor ability? | YES NO |
| h. Do the students have an opportunity to practice skills learned in physical education during class time? | YES NO |

In its revised form the statement of Principle Nine reads: "The physical education program and staff should have adequate administrative support." Two items were deleted and the subdivisions were:

- | | |
|--|--------|
| a. Is the physical education budget adequate? | YES NO |
| b. Is there an equitable distribution of funds between the various phases of the total program? | YES NO |
| c. Is a physical education teacher designated as the responsible coordinator of the activity program? | YES NO |
| d. Are the classes in physical education limited to a specific number? | YES NO |
| e. Is the custodial service adequate in maintaining desirable and healthful conditions in and around the physical education plant? | YES NO |
| f. Is daily participation in the activity program required of all boys? | YES NO |
| g. Are other activities substituted for physical education? | YES NO |
| h. Does this school require a costume as a prerequisite for participation in the activity program? | YES NO |

In Principle Ten, the word "activities" was deleted and the statement now reads, "The physical education program should provide basic instruction for all students." The ten questions were also reduced to eight as indicated below:

- | | | |
|--|-----|----|
| a. Is instruction in the fundamental skills given for all activities in the program? | YES | NO |
| b. Are daily lesson plans used by the physical education teacher? | YES | NO |
| c. Does the teacher move from teaching station to teaching station, giving individual instruction? | YES | NO |
| d. Is provision made during the instructional phase to aid each boy in developing skill equal to his level of ability? | YES | NO |
| e. Are the students divided into small groups and supplied with sufficient equipment to practice the skill being taught? | YES | NO |
| f. Are the fundamental movements included as part of the teaching in the various activities? | YES | NO |
| g. Is proper foot position in walking and in other movements a part of the teaching? | YES | NO |
| h. Is an adapted physical education program provided for those who cannot participate in the regular activity program? | YES | NO |

The degree to which a particular school meets a certain principle is based upon the "YES-NO" answers to the eight questions under Principles Two through Ten. Each "YES" answer is counted and the total number circled in the numbering scale by each principle; thus, five "YES" answers to a principle would yield a five and so on. Principle One is an exception to this procedure. Since this principle involves a number of activities and certain program procedures, a nine point scale (0-8) based upon these procedures was developed, see Chapter IV, page 193. A total score for a school can be computed by adding the number of "YES" answers and multiplying by ten. The best possible score is eighty.

Pilot Study

Once the evaluating instrument was put into usable form, the selection of schools was the next problem to be solved. Correspondence was sent to several qualified individuals asking them to suggest five junior high schools with good activity programs and five with poor activity programs. It was requested, if possible, that the schools selected be in south Texas in order to facilitate the application of the evaluative instrument. Suggestions received from the former President of the State Physical Education Association stated that the programs in the junior high schools in the area mentioned would vary from an average program to no program at all and that the schools having no programs attempted to meet the state requirements by scheduling a time for the physical education activity period and then giving the students a free play period. None of the correspondents would designate schools having either good or poor activity programs because they said that they had no way of defining what was a good or poor program. However, it was suggested that school systems in the communities mentioned below should be included in the study.

Baytown	Orange
Port Arthur	Freeport
Houston	Galveston
Pasadena	Beaumont
Corpus Christi	Victoria

Ten schools were selected from this list of school systems for the Pilot Study and personal interviews were conducted

with the final draft of the instrument being employed in each instance. These interviews lasted approximately forty-five minutes each, exclusive of the time spent in observing and inspecting the facilities. In view of the fact that the final draft of the evaluative instrument was used in the appraisal of the ten Pilot Study schools it was decided to include these schools among the total of the fifty-three institutions contained in this study.

Summary

The evaluating instrument, as finally used, underwent three major revisions. It was felt that this instrument could be utilized for self-evaluation, and that the strengths and weaknesses of the individual physical education programs could be ascertained. The scale appeared to give an impartial report of the standards and values of the physical education programs of the schools visited for this study. The principles used in the evaluative instrument and discussed in the study are stated positively, whereas the instrument has the principles stated in question form. The Pilot Study results indicated that the instrument was adequate to apply to the group of schools chosen as the basis for this study.

CHAPTER IV

APPLICATION OF THE INSTRUMENT

Introduction

As previously stated, the third and final instrument was necessary because previous instruments were unwieldy in length, difficult to tabulate, and repetitions. This new scale contained the ten principles used in the study. These principles were the same used in the original forms but were reworded and a different scoring procedure adopted.

A Pilot Study was conducted in ten schools and the instrument was found to be ready for use. The first school was visited on April 17, 1956. And in each of the subsequent visits the school personnel were cooperative and interested.

Data will be presented in the tables that follow by male enrollment categories rather than in chronological order of visitation. Three classifications were used based upon the male enrollment: Group A included those schools that had 100-349 boys; Group B comprised those schools with a male enrollment of 350-599; and Group C included those schools with an enrollment of 600-1,400.

The junior high schools in Table I, were classified as small since the male enrollment was from 100-349. This table

TABLE I
 NAMES AND LOCATIONS OF SCHOOLS HAVING A MALE
 POPULATION OF 100-349 IN GROUP A

Name of School	Male Enrollment	City	City Population
Amelia	130	Amelia	967
Baker	200	Austin	132,459
Bridge City	108	Bridge City	3,000
Cedar Bayou	150	Baytown	22,983
Clute	150	Clute	3,200
Crockett	228	Beaumont	94,014
Freeport	250	Freeport	6,012
Grove	340	Grove City	3,150
Henry	144	Austin	132,459
Lake Jackson	198	Lake Jackson	2,897
Lamar	346	Austin	132,459
Parker	310	Ft. Worth	278,778
Port Neches	250	Port Neches	5,448
Velasco	100	Velasco	2,260
Washington	325	Houston	596,163
West Orange	117	West Orange	2,539

shows the schools, the city in which each is located, and the population of that city. Nine of these schools are located in towns with a population under 7,000, while the other seven schools are in large cities, but these particular schools have a small enrollment.

In Table II are shown the twenty-two schools in Group B having from 350-599 boys enrolled.

TABLE II
NAMES AND LOCATIONS OF SCHOOLS HAVING A MALE
POPULATION OF 350-599 IN GROUP B

Name of School	Male Enrollment	City	City Population
Allen	535	Austin	132,459
Alvin	350	Alvin	3,701
Austin	410	Galveston	66,568
Baytown	375	Baytown	22,983
Bowie	410	Beaumont	94,014
Cullen	550	Houston	596,163
Daggett	350	Ft. Worth	278,778
Dowling	400	Beaumont	94,014
Fulmore	465	Austin	132,459
Jackson	502	Pasadena	22,483
Johnston	450	Houston	596,163
Katy	463	Katy	849
Lovenberg	350	Galveston	66,568
Mann	440	Baytown	22,983
McArthur	450	Beaumont	94,014
McLean	562	Ft. Worth	278,778
Monnig	420	Ft. Worth	278,778
Rusk	550	Dallas	434,462
South Houston	400	South Houston	4,126
Southmore	450	Pasadena	22,483
Spence	500	Dallas	434,462
Stripling	550	Ft. Worth	278,778

The apparent incongruity of the Katy school concerning enrollment and city population is explained by the fact that this is a consolidated district.

In Table III the junior high schools classified as large were listed, since the male enrollment was from 600-

TABLE III
NAMES AND LOCATIONS OF SCHOOLS HAVING A MALE
POPULATION OF 600-1,400 IN GROUP C

Name of School	Male Enrollment	City	City Population
Burbank	1,200	Houston	596,163
Deady	800	Houston	596,163
Edison	650	Houston	596,163
Elder	650	Ft. Worth	278,778
Gaston	750	Dallas	434,462
Hamilton	1,086	Houston	596,163
Hartman	625	Houston	596,163
Highland Park	670	Dallas	434,462
Hogg	630	Houston	596,163
Jackson	750	Houston	596,163
Lanier	900	Houston	596,163
Long	600	Dallas	434,462
Marshall	950	Houston	596,163
Pershing	1,350	Houston	596,163
Wilson	1,000	Pt. Arthur	57,530

1,400. All of these schools are located in large cities, with the exception of one, which has a population of 57,530. There are fifteen schools in Group C.

Typical Interview

The school selected for the first interview was in the small enrollment category, Group A, and had 117 boys in attendance. The physical education teacher here also served as coach.

The principal was contacted first. After examining the instrument and asking questions, the principal led the way on an inspection tour of the lockers, shower rooms, and dressing rooms.

The physical education teacher was given a copy of the scale to follow as he was questioned. The questioning period averaged forty-five minutes. The activity program of this school was examined thoroughly in terms of the factors in the measuring instrument.

After application of the instrument a more thorough tour of the facilities was conducted; the physical plant was inspected and classes were observed whenever possible. In all cases the physical education teachers and principals showed a lively interest in their schools' relative position to scores made by other schools.

Method of Scoring Principle One

In order to evaluate the activity programs with reference to Principle One it was necessary to construct a simple scale that would permit the classification of schools on a basis similar to that used for the other divisions of the evaluative instrument or on 0-8 point scale. The factors used in constructing this scale were as follows:

- a. Number of activities offered
- b. Extent of team games offered
- c. Balance of program between the fall and spring semesters
- d. Equality of time allotment for the various activities
- e. Extent of teaching done
- f. Extent of areas adequately marked for the activities
- g. Indications of plans for improvement of the program.

The following is the scale used in evaluating the degree to which Principle One was being met.

Scale for the Analysis of Principle One

Principle One: "A program offering a wide variety of activities, with opportunities for acquiring a number of motor skills."

- 0--In addition to touch football, basketball, and softball, one or two other sports. No indication of teaching.
- 1--In addition to touch football, basketball, softball, two or three other sports. No indication of teaching; activities are included in the program but are not taught.
- 2--In addition to touch football, basketball, softball, three or four other sports. No indication of teaching; activities are included in the program but are not taught.
- 3--In addition to touch football, basketball, and softball, four or more activities. Program is balanced between fall and spring semesters with equal number of sports. Some teaching is done in one or two activities but in the seventh grade only.
- 4--In addition to touch football, basketball, and softball, a variety of team games are included in the program. Evidence of effort to equalize time allotted for the various activities. Some teaching is done in two or three activities but in the seventh grade only.
- 5--Touch football, basketball, and softball are included in the total program but do not monopolize it; other team

games plus individual activities are offered. Teaching is done in the seventh grade for all games and sports in the activity program.

- 6--Indications of a well-rounded schedule; time allotment equalized between all activities. Playing areas established but not marked. Fall and spring semesters well balanced between the various sports and games. Some teaching.
- 7--Offering a variety of activities; team games, individual sports, co-educational activities, rhythms, and self-testing stunts. Some playing areas marked. Equal balance between fall and spring semesters. Teaching is done in the seventh and eighth grades in all of the activities included in the program.
- 8--Time allotment equalized among the various activities in the program. Wide variety of activities, as listed in number seven. Activities evenly distributed between fall and spring semesters. Sufficient number of marked areas to handle class loads. Indications of plans for future improvement and additions to the program. Teaching done in seventh, eighth and ninth grades.

All of the completed instruments were separated according to the afore mentioned scoring scale for the analysis of Principle One. In order to check the accuracy of this method, the responses were evaluated by two different individuals as is shown in Table IV. This table indicates the comparative scoring for Principle One, showing the number of schools that

TABLE IV
COMPARATIVE SCORING OF PRINCIPLE ONE BY NUMBER
OF SCHOOLS AND PERCENTAGES

Score	Scorer No. 1*		Scorer No. 2**	
	Number of Schools	Percentage	Number of Schools	Percentage
0	9	17	5	9
1	1	2	7	13
2	5	9	3	6
3	7	13	10	19
4	8	15	7	13
5	15	28	11	21
6	3	6	7	13
7	5	9	3	6
8	0	00	0	0

Note: The 0-8 scale listed under "Score" in this table is explained in the foregoing paragraphs.

*J. M. Muse, Assistant Professor of Health and Physical Education, University of Houston,

**W. J. Rhodes, Professor of Health and Physical Education, University of Houston.

The scoring was done on a zero to eight scale based on how well the program adhered to Principle One. The coefficient of correlation between these two scoring efforts of Principle One was .94. This would indicate that the method by which this principle was judged is objective.

Scoring of Principles Two Through Ten

To facilitate the decision, on the remaining nine principles, as to what degree a principle was met the "YES" responses counted zero to eight rather than the original zero to five.

Table V indicates the scoring of Principle Two and shows the number and percentage of schools with the affirmative responses of the teacher. As indicated in Table V, there were few indications that the physical education program was considered to be an integral part of the total educational effort of the school. The system of grading in physical education did not conform to the institutional policy for evaluating pupil performance. One indication of this fact was the low rating of the use of performance tests for each student as a part of the regular teaching procedure. Upon the basis of these responses, the physical education program could not be considered an integral part of the total educational effort of the school.

In connection with Table VI, the percentages were rather high on several of the eight questions, indicating that in some measure the physical education program does serve all pupils, giving adequate opportunity to those who need physical education most. Only one school responded affirmatively to the question concerning a medical examination for all students

TABLE V

NUMBER AND PERCENTAGE OF SCHOOLS IN WHICH THE ACTIVITY
PROGRAM WAS JUDGED TO BE CONSISTENT WITH
THE ITEMS IN PRINCIPLE TWO

Principle Two: "To what degree is the physical education program considered an integral part of the total educational effort of the school?"

Supporting Questions Under Principle Two	Number of Schools	Per Cent of Schools
a. Is the following concept believed and practiced by the physical education teachers of this school? Physical education is education through the physical.	23	43
b. Does a system of grading exist in physical education that conforms to the school policy for evaluating pupil performance?	10	19
c. Does this program attempt to develop students through self-discipline and self-direction?	20	38
d. Is there an established system for making up absences from the physical education class?	7	13
e. Does the physical education teacher have an established policy for "temporary" or daily excuses?	38	72
f. Are play situations employed to teach respect for properly appointed authority?	25	47
g. Are performance tests given each student as a part of the regular teaching procedure?	2	4
h. Is the activity program conducted in order to promote confidence in the learner?	18	34

In Table VI the scoring for Principle Three is shown, based upon the numbering scale (0-8).

TABLE VI
NUMBER AND PERCENTAGE OF SCHOOLS IN WHICH THE ACTIVITY
PROGRAM WAS JUDGED TO BE CONSISTENT WITH
THE ITEMS IN PRINCIPLE THREE

Principle Three: "To what degree does the program serve all pupils, giving adequate opportunity to those who need physical education most?"		
Supporting Questions Under Principle Three	Number of Schools	Per Cent of Schools
a. Does this school require a medical examination before the student can participate in the activity class?	1	2
b. If a student has a medical excuse from physical education, is the physician required to list and sign those activities in which the student can participate.	17	32
c. Does this school have a sufficient variety of equipment and facilities to make possible a well-rounded program of activities?	48	91
d. Is full use made of the playground area for the activity classes?	35	66
e. Is there equitable scheduling of facilities for both boy's and girl's activity classes?	48	91
f. Are the dressing rooms adequate, providing sufficient space for student's clothing?	29	55
g. Does this school have shower rooms with sufficient shower heads to handle peak loads?	37	70
h. Have all necessary safety precautions been supplied for the play areas?	28	53

prior to participation in the activity class. A high percentage, 91 per cent, of schools had adequate equipment and facilities to make possible a well-rounded program with the same percentage revealing that there was equitable scheduling of facilities for the use of both boys and girls. The fact that only 53 per cent of the schools had taken all necessary safety precautions for the play areas would indicate that there is room for some improvement.

The number of schools that have consistent practice on the basis of Principle Four is shown in Table VII.

TABLE VII
NUMBER AND PERCENTAGE OF SCHOOLS IN WHICH THE ACTIVITY
PROGRAM WAS JUDGED TO BE CONSISTENT WITH
THE ITEMS IN PRINCIPLE FOUR

Principle Four: "To what degree is the program conceived and conducted with an awareness of the unitary nature of man?"		
Supporting Questions Under Principle Four	Number of Schools	Per Cent of Schools
a. Is an effort made to broaden the concept of physical education to include the various social experiences and not merely to emphasize physical exertion?	11	21
b. Are the social adjustments necessary in various games, by adhering to the rules, included as a part of the instruction?	17	32
c. Is health information relative to the activity program a part of the instruction?	34	64

TABLE VII--Continued

Supporting Questions Under Principle Four	Number of Schools	Per Cent of Schools
d. Are the boys in the program given opportunities to understand some of the outcomes of competition, such as how to win graciously, to lose is not a disgrace, or not to take unfair advantage of an opponent?	40	75
e. Are discussions conducted on "How to behave at a game?"	36	68
f. Are students given consumer education in sporting goods?	0	0
g. Is how to be a good spectator a phase of the teaching?	21	40
h. Are strategies of offense and defense taught as a part of each activity?	6	11

The schools and their practices with relation to Principle Four, as shown in Table VII, indicated very little awareness of the unitary nature of man. The educational possibilities inherent in physical education were not fully employed for optimum development of the individual. For instance, there was not much concentration on broadening the concept of physical education to include the various social experiences instead of mere physical exertion.

The judging of schools and their practice in relation to the items supporting Principle Five is shown in Table VIII.

TABLE VIII

NUMBER AND PERCENTAGE OF SCHOOLS IN WHICH THE ACTIVITY
PROGRAM WAS JUDGED TO BE CONSISTENT WITH
THE ITEMS IN PRINCIPLE FIVE

Principle Five: "Does a course of study exist which is educationally sound, based upon the interests, needs, purposes, and capacities of the youth it serves?"		
Supporting Questions Under Principle Five	Number of Schools	Per Cent of Schools
a. Is a detailed course of study available for each of the three grades?	11	21
b. Does the course of study contain general and specific objectives to be reached at each grade level?	13	25
c. Are the activities divided into units with a suggested procedure to follow for each unit?	14	26
d. Are the activities included in the program suited to the needs and developmental characteristics of this age level?	42	79
e. Are the activities taught in such a manner that will enable each student to progress at his own rate?	2	4
f. Are the students made aware of the objectives for which the teacher is striving?	14	26
g. Does the program aid boys in understanding their growth patterns, i.e., lack of height, or excessive weight?	16	30
h. Is the teaching conducted with an awareness of the teacher-pupil relationship?	23	43

Very few schools exhibited a course of study in Physical education that was educationally sound. The activities in the program were seldom divided into units with a suggested procedure to follow. More teachers indicated that they included activities that suited the needs and developmental characteristics of the junior high school boys than any other supporting question under this principle. Only two schools taught the activities in a manner that would enable each student to progress at his own rate.

The degree to which the physical education program was designed to promote physical fitness is shown in Table IX.

While the responses, as indicated in Table IX, showed encouragement by the teachers of wise use of leisure time through physical education, the promotion of physical fitness in order to combat sedentary living was not very well accomplished by the schools in this study. For example, there was little evidence that students were helped to understand the principle of exercise; that the body reaches and maintains maximum development through continued exercise. There were only two schools in which proper body mechanics were taught. It was indicated that in 40 per cent of the schools the students were taught that an individual needs more exercise than can be supplied in one physical education period per day.

TABLE IX
NUMBER AND PERCENTAGE OF SCHOOLS IN WHICH THE ACTIVITY
PROGRAM WAS JUDGED TO BE CONSISTENT WITH
THE ITEMS IN PRINCIPLE SIX

Principle Six: "Is the program designed to combat sedentary living and promote physical fitness?"

Supporting Questions Under Principle Six	Number of Schools	Per Cent of Schools
a. Are provisions made in the program for strengthening certain muscles as a part of maintaining good physical condition, i.e. strengthening abdominal muscles or the shoulder girth?	22	42
b. Are students taught that muscular activity is necessary for the proper functioning of the organs?	19	36
c. Are boys taught that for developmental purposes, they need more exercise than can be included in one physical education period per day?	21	40
d. Are proper body mechanics taught?	2	4
e. Are students helped to understand the principle of exercise that the body reaches and maintains maximum development through continued exercise?	20	38
f. Is good posture positively encouraged?	26	49
g. Are boys taught the necessity of relaxation in relation to physical activity?	3	6
h. Are boys taught the correct way to run?	32	60

The degree to which the physical education program develops possibilities for the wise use of leisure time and for supplementing community facilities for joint recreational purposes is indicated in Table X. These results are also based on the responses and measured on the 0-8 numbering scale.

TABLE X
NUMBER AND PERCENTAGE OF SCHOOLS IN WHICH THE ACTIVITY
PROGRAM WAS JUDGED TO BE CONSISTENT WITH
THE ITEMS IN PRINCIPLE SEVEN

Principle Seven: "Does the physical education program develop possibilities for the wise use of leisure time and by supplementing community facilities for joint recreational purposes?"		
Supporting Question Under Principle Seven	Number of Schools	Per Cent of Schools
a. Are the students encouraged to participate in the activities taught during class in after school hours?	26	49
b. Does the school provide facilities and equipment for community recreational use?	37	70
c. Do community members use the facilities and equipment?	37	70
d. Is there an organized summer recreation program conducted in this school?	24	45
e. Is having fun through wholesome play encouraged as an outcome of physical education?	35	66
f. Do the students have opportunities to practice the skills learned in the activity classes in an organized intramural program?	26	49
g. Is the intramural program conducted after school?	21	40
h. Are co-educational activities included in the program?	5	9

The use of community facilities for leisure time pursuits was rather widely encouraged by many of the schools, as is shown in Table X. In those schools where the facilities and equipment were provided for community recreational use, the community members use them. This is shown by the identical figures for sections b and c under this principle; thirty-seven schools provided equipment and facilities and thirty-seven schools indicated that members of the community took advantage of the opportunity. While the intramural programs were conducted more often during school hours than after, and the activities were limited, opportunities were provided for this type of recreation.

The consistency with which the various schools observed the items supporting Principle Eight are examined in Table XI. The indications would seem to be that the best teaching-learning situation was not provided by these schools as shown in Table XI.

A level of proficiency was not very well established for each of the three grades. Almost half of the teachers stated that students were given an opportunity to practice skills learned during class time. One difficulty was the lack of a sufficient practice period for each individual in every learning situation. A very little individual attention and instruction was given, dependent upon the level of ability of a particular pupil.

TABLE XI

NUMBER AND PERCENTAGE OF SCHOOLS IN WHICH THE ACTIVITY
PROGRAM WAS JUDGED TO BE CONSISTENT WITH
THE ITEMS IN PRINCIPLE EIGHT

Principle Eight: "Is program continuity provided in order
to create the best possible teaching-
learning situation?"

Supporting Question Under Principle Eight	Number of Schools	Per Cent of Schools
a. Are the classes divided by half grades? i.e., all low sevens in the same period, etc.	9	17
b. Does the activity program have def- inite steps of progression for each of the three grades?	0	0
c. Is a sufficient practice period provided for each boy in every learning situation?	2	4
d. Are students in a particular class given individual attention and instruction dependent upon their level of ability?	4	8
e. Are the relationships between var- ious fundamental skills, with the necessary modifications in- cluded in the teaching? i.e., throwing in baseball; throwing (passing) in football; guarding in basketball, and using the shuf- fle step-together-step related to the basic two-step as used in social dance.	26	49
f. Is a level of proficiency estab- lished for each grade?	2	4
g. Are the standardized tests used to measure motor ability?	3	6
h. Do the students have an oppor- tunity to practice skills learned in physical education during class time?	24	45

The degree to which the physical education program and staff receive administrative support is shown in Table XII.

TABLE XII

NUMBER AND PERCENTAGE OF SCHOOLS IN WHICH THE ACTIVITY PROGRAM WAS JUDGED TO BE CONSISTENT WITH THE ITEMS IN PRINCIPLE NINE

Principle Nine: "Does the physical education program and staff have adequate administrative support?"		
Supporting Questions Under Principle Nine	Number of Schools	Per Cent of Schools
a. Is the physical education budget adequate?	46	87
b. Is there an equitable distribution of funds between the various phases of the total program?	46	87
c. Is a physical education teacher designated as the responsible coordinator of the activity program?	33	62
d. Are the classes in physical education limited to a specific number?	1	2
e. Is the custodial service adequate in maintaining desirable healthful conditions in and around the physical education plant?	32	60
f. Is daily participation in the activity program required for all boys?	42	79
g. Are other activities substituted for physical education?	15	28
h. Does this school require a costume as a prerequisite for participation in the activity program?	50	94

The data in Table XII indicate that the physical education program and staff received adequate administrative support. For instance, the budget was both adequate and equally distributed between the various phases of the program. Daily participation was required of all boys in 79 per cent of the schools. One instance of minimal effort expended by the administration was indicated in Table XII by the fact that only one school had the size of the physical education classes limited to a specific number.

The consistency with which the various schools observed the items supporting Principle Ten is examined in Table XIII.

TABLE XIII

NUMBER AND PERCENTAGE OF SCHOOLS IN WHICH THE ACTIVITY
PROGRAM WAS JUDGED TO BE CONSISTENT WITH
THE ITEMS IN PRINCIPLE TEN

Principle Ten: "Does the program provide basic instruction for all students?"		
Supporting Questions Under Principle Ten	Number of Schools	Per Cent of Schools
a. Is instruction in the fundamental skills given for all activities in the program?	6	11
b. Are daily lesson plans used by the physical education teachers?	2	4
c. Does the teacher move from teaching station to teaching station, giving individual instruction?	5	9
d. Is provision made during the instructional phase to aid each boy in developing skill equal to his level of ability?	1	2

TABLE XIII--Continued

Supporting Questions Under Principle Ten	Number of Schools	Per Cent of Schools
e. Are the students divided into small groups and supplied with sufficient equipment to practice the skill being taught?	6	11
f. Are the fundamental movements included as a part of the teaching in the various activities?	8	15
g. Is proper foot position in walking and in other movements a part of the teaching?	9	17
h. Is an adapted physical education program provided for those who cannot participate in the regular activity program?	0	0

Physical education programs in selected schools, as shown in Table XIII, did not provide very much basic instruction for all students. Although a high percentage of teachers interviewed maintained that the physical education program and staff received adequate administrative support, as stated in Principle Nine, there were very few "YES" answers in support of Principle Ten, indicating that the physical education program fails to provide basic instruction to a very high degree.

Summary

The following statements indicated the degree to which the principles of physical education were being met in these schools as revealed by the application of this measuring

instrument. Physical education programs were not conducted as an integral part of the total school program. Most of the programs provided opportunities for all students to participate in some measure, but there was little indication of awareness of the unitary nature of man.

Few schools had courses of study in physical education that were educationally sound. Teachers encouraged wise use of leisure time but not from the standpoint of physical fitness as a means of compensating for sedentary living. Physical education staff members reported that they had adequate administrative support but lack of program continuity might indicate otherwise.

Comparison of Schools and Excellence of Program

Copies of the completed evaluation instrument were divided into four classifications based upon the scores of the various schools. These classifications were established for the purpose of dividing the schools into four categories: (1) poor, which included total scores of 0-20 on the evaluation instrument; (2) fair, included the total scores of 21-40; (3) good, those schools that had total scores between 41-60; and (4) excellent, if the total score was from 61-80.

The comparison of schools and excellence of their programs is shown in Table XIV.

While the number of schools visited was not great, there appears to be an indication that the smaller schools tend to

TABLE XIV
EVALUATIVE INSTRUMENT SCORES OF FIFTY-THREE
SCHOOLS BASED UPON THE MALE POPULATION

Groups of Schools	Poor	Fair	Good	Excel- lent	Number Schools in Group
	Number Schools Scoring 0-20	Number Schools Scoring 21-40	Number Schools Scoring 41-60	Number Schools Scoring 61-80	
Group A 100-349 Boys	2	12	2	0	16
Group B 350-599 Boys	5	15	2	0	22
Group C 600- 1,400 Boys	3	9	3	0	15
Total Number Schools	10	36	7	0	53

have better over-all physical education programs than the larger ones, while those in Group B appear to be weaker than either of the others. The indications are that all three groups tend to cluster in the 21-40, or Fair, category. These observations are drawn from the data in Table XIV.

Status of the Activity Programs in Schools by Groups

The status of the activities offered in the boys' physical education programs for Group A, which are those

schools having a male population of from 100-349, is shown in Table XV.

TABLE XV
STATUS OF THE ACTIVITY PHASE OF BOYS' PHYSICAL
EDUCATION PROGRAMS FOR GROUP A

Activities	Teaching done in Grade			Semester Included		Adequate Areas Marked
	7th	8th	9th	1st	2nd	
Baseball	0	0	0	0	0	0
Basketball	9	2	0	13	9	13
Dodge Ball	0	0	0	2	1	3
Soccer	3	0	0	4	3	4
Softball	9	2	0	0	16	16
Speedball	2	2	1	0	3	3
Touch Football	8	2	0	14	3	13
Track and Field	8	3	0	1	14	2
Volleyball	5	2	0	6	9	11
Badminton	0	0	0	0	1	1
Boxing	0	0	0	1	0	0
Horseshoes	0	0	0	2	3	3
Tennis	0	0	0	1	1	1
Tumbling	5	1	0	3	5	4
Wrestling	0	0	0	1	1	1
Calisthenics	0	0	0	0	0	0
Physical Fitness	0	0	0	6	3	*Adequate
Social Dance	2	1	1	2	1	2
Square Dance	2	1	1	3	1	3
Adapted	0	0	0	1	1	1
Co-educational	0	0	0	2	0	0
Swimming	1	1	0	1	1	1
Diving	0	0	0	0	0	0
Water Safety Instruction	0	0	1	1	1	1

*Since marked areas are not necessarily needed for physical fitness tests, those schools in which there was sufficient space to conduct these tests were marked "Adequate" in Tables XV, XVI, XVII, and XVIII.

In Table XV it was indicated that teaching was done in the seventh grade in schools of Group A most frequently in basketball, softball, touch football, and track and field, while five of the sixteen schools taught volleyball and tumbling in the seventh grade. Less teaching was done in schools in this group in the eighth grade with some teaching done in track and field in three schools, while some teaching was found in the eighth grade in basketball, softball, touch football, and volleyball. Very little teaching was done in the ninth grade in schools in this group. Only four activities were taught, those being speedball, social dance, square dance, and water safety instruction. These last activities were taught in only one school.

Thirteen of the sixteen schools had basketball during the fall semester, while nine schools had basketball in the spring semester also. Fourteen schools had touch football in the first semester. Table XV showed further that all of the schools had softball in the second semester with fourteen having track and field. Examination of this table indicated that the physical education programs of the schools in this group were dominated by basketball, touch football, softball, and track and field.

The schools in Group A, as shown in Table XV, had adequately marked areas for most of the activities listed on the evaluation instrument.

The data in Table XVI indicate the status of the activities offered in the boys' physical education program for Group B, which are those schools having a male population of from 350-599. The table shows in which grades teaching was

TABLE XVI
STATUS OF THE ACTIVITY PHASE OF BOYS' PHYSICAL
EDUCATION PROGRAMS FOR GROUP B

Activities	Teaching Done in Grade			Semester Included		Adequate Areas Marked
	7th	8th	9th	1st	2nd	
Baseball	0	0	0	0	0	0
Basketball	11	3	1	17	10	10
Dodge Ball	0	0	0	1	1	1
Soccer	5	1	0	7	3	1
Softball	12	3	1	0	22	8
Speedball	0	0	1	2	0	0
Touch Football	10	3	1	22	0	3
Track and Field	9	2	1	2	16	3
Volleyball	7	2	1	9	8	12
Badminton	0	0	0	0	0	0
Boxing	1	1	0	3	0	1
Horseshoes	0	0	0	1	1	1
Tennis	0	0	0	1	2	1
Tumbling	7	2	0	8	2	0
Wrestling	2	1	0	2	0	2
Calisthenics	0	0	0	7	6	Adequate
Physical Fitness	0	0	0	7	7	Adequate
Social Dance	1	0	0	2	1	1
Square Dance	0	0	0	0	0	0
Adapted	0	0	0	1	1	1
Co-educational	0	0	0	1	0	0
Swimming	4	1	0	4	3	4
Diving	1	1	0	1	1	1
Water Safety Instruction	0	1	0	1	1	1

Note: In Tables XV, XVI, XVII, and XVIII the column "Teaching Done in Grade" indicates in which grade the activities were actually taught. The column "Semester Included" indicates only whether the activity was offered in the first or second semester and not whether teaching was done.

done, in which semester the activities were offered, and whether there were sufficient areas marked for the conduct of these activities.

As shown in Table XVI, teaching was done more frequently in the seventh grade than in the other grades. In the seventh grade, of the twenty-two schools, the teaching of basketball was done in eleven; twelve, softball; ten, touch football; nine, track and field; and teaching was done in seven schools of volleyball and tumbling. In five of the schools of this group soccer was taught in two; in two, wrestling; in one, dance; in four, swimming was taught; and in one, diving was taught in the seventh grade. There was less teaching done in the eighth grade than there was in the seventh. Three of these schools had basketball taught in the eighth grade, three softball, three touch football, two track and field, two volleyball, and two tumbling. There was teaching in the eighth grade in one school in the following activities: soccer, boxing, wrestling, swimming, diving, and water safety instruction. Practically no teaching was done in the institutions in Group B in the ninth grade; one school included basketball, one softball, one speedball, 1 one touch football, one track and field, and one volleyball.

Seventeen of the twenty-two schools had basketball during the first semester and ten schools had it in the second semester. All twenty-two of the schools had touch football in the fall semester; none had it in the spring term. Nine

of the schools had volleyball in the first semester and eight had it in the second semester. Eight of the schools had tumbling in the fall semester and two had it in the spring semester. Calisthenics were conducted by eight schools in the first semester and by seven in the second semester. The first semester had seven schools with physical fitness and the same number for the second semester. Twenty-two schools had softball in the spring semester. Track and field was conducted during the second semester in sixteen of the total number of schools while two had it in the first semester. Four schools had swimming in the first term and three had it in the second term.

In Table XVI, attention was directed to the fact that the usual sports were rather heavy in the schools of Group B; that is, basketball, softball, touch football, and track and field. However, there were several more activities included in this group than in Group A. There were, in addition, soccer, tumbling, wrestling, swimming, diving, boxing, calisthenics, and physical fitness.

The areas for the activities listed in the evaluative instrument were adequately marked in the schools of Group C.

The status of the activities offered in the boys' physical education programs for Group C, which include the schools with from 600-1,400 boys enrolled is shown in Table XVII. This table indicates in which grades teaching was done, in which semester the activities were offered, and whether

there were sufficient areas marked for the conduct of these activities.

In Table XVII attention is directed to the fact that teaching was done most frequently in the seventh grade in basketball, softball, touch football and swimming. The

TABLE XVII
STATUS OF THE ACTIVITY PHASE OF BOYS' PHYSICAL
EDUCATION PROGRAMS FOR GROUP C

Activities	Teaching done in Grade			Semester Included		Adequate Areas Marked
	7th	8th	9th	1st	2nd	
Baseball	0	0	0	0	0	0
Basketball	10	0	0	13	9	15
Dodge Ball	0	0	0	0	0	0
Soccer	4	1	0	4	1	4
Softball	9	0	0	3	15	9
Speedball	2	0	0	3	2	0
Touch Football	8	0	0	15	6	9
Track and Field	4	0	1	1	8	1
Volleyball	1	0	0	9	11	9
Badminton	1	1	0	1	1	1
Boxing	0	0	0	1	1	1
Horseshoes	0	0	0	0	0	0
Tennis	1	1	0	1	1	1
Tumbling	5	2	2	4	6	6
Wrestling	0	0	0	0	1	1
Calisthenics	0	0	0	7	7	Adequate
Physical Fitness	0	0	0	5	5	Adequate
Social Dance	0	0	0	0	0	0
Square Dance	0	0	0	0	0	0
Adapted	0	0	0	0	0	0
Co-educational	0	0	0	0	0	0
Swimming	11	6	3	11	10	11
Diving	0	0	1	1	1	1
Water Safety Instruction	0	1	2	2	2	2

emphasis on swimming in Group C, eleven of the fifteen schools' programs offered it in the seventh grade, was a different trend than that exhibited by the two previous groups. Tumbling was taught in five of the fifteen schools in the seventh grade, while four schools had soccer, and track and field at this level. Two Group C schools had seventh grade speedball, one had volleyball, one had badminton, and one had tennis.

Teaching was infrequent in the eighth grade in schools of this group with most teaching done in swimming. In two schools tumbling was taught, in one soccer, in one badminton, in one tennis, and in one school water safety instruction was offered to eighth graders.

There was very little teaching done in the ninth grade; three programs offered teaching in swimming; two, water safety instruction; two, tumbling, in one track and field, and in one diving was taught.

Thirteen of the fifteen schools in Group C had basketball during the first semester and nine had it in the second. Soccer was offered by four schools the first term while only one offered it the second term. Three Group C schools had softball the first semester and all fifteen had it the second semester. Speedball was included by three schools in the first semester and by two in the second semester. Touch football was in the program of all fifteen schools for the fall term

and in six in the spring term. One school had track and field the fall semester and eight had it in the spring. Volleyball was played during the first semester by nine schools and by eleven the second semester. Badminton, boxing, tennis, and diving were offered by one school in the fall and by one school in the spring. Four schools in this classification had tumbling during the fall and six in the spring semester. Calisthenics were conducted by seven schools in the fall and by seven in the spring, while physical fitness was found in five schools in the spring and five in the fall. The fall semester had eleven schools with swimming in the program and ten schools for the spring. Water safety instruction was held by two schools the first semester and by two schools the second semester.

The areas for the activities conducted by the schools in Group C were adequately marked.

In Table XVIII a composite of Tables XV, XVI, and XVII was shown. The status of boys' physical education programs was indicated for Groups A, B, and C and was presented in this table.

As seen in Table XVIII four activities dominated the physical education programs of schools in all three groups, A, B, and C. These sports were basketball, softball, touch football, and track and field. Baseball was not included in the physical education programs of any of the fifty-three institutions in this study.

TABLE XVIII

COMPOSITE STATUS OF THE ACTIVITY PHASE OF BOYS' PHYSICAL
EDUCATION PROGRAMS FOR GROUPS A, B, AND C

Activities	Teaching Done in Grade			Semester Included		Adequate Areas Marked
	7th	8th	9th	1st	2nd	
Baseball	0	0	0	0	0	0
Basketball	30	5	1	43	28	38
Dodge Ball	0	0	0	3	2	4
Soccer	12	2	0	15	7	9
Softball	30	5	1	3	53	33
Speedball	4	2	2	5	5	3
Touch Football	26	5	1	51	9	25
Track and Field	21	5	2	4	38	6
Volleyball	13	4	1	24	28	32
Badminton	1	1	0	1	2	2
Boxing	1	1	0	5	1	2
Horseshoes	0	0	0	3	4	5
Tennis	1	1	0	3	4	3
Tumbling	17	5	2	15	13	10
Wrestling	2	1	0	3	2	4
Calisthenics	0	0	0	14	13	Adequate
Physical Fitness	0	0	0	18	15	Adequate
Social Dance	3	1	1	4	2	3
Square Dance	2	1	1	3	1	3
Adapted	0	0	0	2	2	2
Co-educational	0	0	0	3	1	0
Swimming	16	8	3	16	14	16
Diving	1	1	1	2	2	2
Water Safety Instruction	0	2	3	4	4	4

Only six of the total number of schools in all three groups had a track, but track and field was one of the four activities upon which there was concentration.

A list of the activities offered in the physical education programs in the fifty-three schools visited was shown in this table.

Some teaching was done in the seventh grade with thirty programs that offered basketball; thirty also offered softball in the seventh grade, while in twenty-six schools teaching was done in touch football. In twenty-one schools track was taught in the seventh grade and in seventeen schools tumbling was taught at this level. Sixteen schools had some teaching in the seventh grade of swimming, while thirteen had volleyball, and in twelve soccer was taught.

There was some indication of teaching in the seventh grade in recreational activities. For instance, badminton, boxing, tennis, social dance, square dance, and diving were taught at this level by these schools.

A decrease was noted in the amount of teaching done in the eighth grade in all of the schools of the study. Eight programs offered swimming in the eighth grade. Eighth grade teaching was done in five schools in basketball, softball, touch football, track and field and tumbling. It was indicated in four schools that some teaching was done in volleyball for the eighth graders.

Recreational activities for the eighth grade were taught in a few of the schools; these sports were volleyball, badminton, tennis, social dance, square dance, and diving.

Teaching in the ninth grade was very infrequent. In three of the schools some ninth grade teaching was done in diving and water safety instruction. In two programs some

teaching was done in speedball, track and field, tumbling, social dance and square dance for ninth graders. Teaching in the ninth grade, though infrequent, was done primarily in the recreational sports.

The seasonal sports were included in that semester in which the season for a particular sport occurs, although there was some overlap between the first and second semesters in some activities. Fifty-one schools had touch football in the first semester and nine had it in the second semester. Forty-three schools had basketball the first term and twenty-eight also had it the second semester. Volleyball was taught during the first semester in twenty-four schools and during the second semester in twenty-eight schools. Physical fitness was conducted in eighteen schools during the first semester and in fifteen the second one. Swimming was placed in the first semester by sixteen schools while fourteen had swimming in the second semester. The first semester included fifteen schools that had soccer while seven schools put it in the second semester.

All activities, with the exception of baseball, were offered both semesters when a school indicated that such an activity was in the program.

During the second semester fifty-three schools offered softball, while three schools offered it during the first semester. Thirty-eight schools had track and field the

second semester and four schools had it during the first semester. Twenty-seven schools included claisthenics in their programs with fourteen having it in the fall term and thirteen having it in the spring term.

Some of the schools indicated that a few of the activities were in both semesters. This was particularly true of basketball. Some of the other activities designated as being in both semesters were touch football, volleyball, calisthenics, tumbling, physical fitness and swimming. This time allotment for the various activities will be shown by number of weeks and by semesters in Tables XXIII through XXVI.

In those activities offered by most of the schools it was indicated that the play areas were adequately marked. Thirty-eight schools had adequately marked areas for basketball, thirty-three schools for softball, twenty-five schools for touch football, thirty-two schools for volleyball, and ten schools for tumbling.

Only sixteen schools had swimming pools, with eleven of these in Group C; four pools in Group B; and Group A had one school with a pool.

Summary

The activity phase of the boys' physical education programs for the three groups, A, B, and C, based on the number

of boys enrolled, was shown in the preceding tables. A list of the activities was included and the grades in which actual teaching was done were shown; the semester in which the activities were included and whether or not adequate playing areas were marked off was also indicated.

There was some teaching done in the seventh grade; very little teaching was done in the eighth grade, while teaching in the ninth grade was very infrequent. In general, the season sports are included in that semester in which a particular season occurs. Some of the schools indicated that a few activities were included in both semesters, this was particularly true of basketball. Most of the schools had adequately marked areas for the activities that were offered. Only sixteen of the schools had swimming pools.

Teachers Evaluation of Activities

After investigating the status of boys' physical education programs indicating those activities most frequently found in the three groups, A, B, and C, the teachers were asked to evaluate the activities and to show what plans they had for improving the program.

In Table XIX is indicated the individual teacher's evaluation of the various activities included in the program in Group A.

TABLE XIX
TEACHER EVALUATION OF ACTIVITIES AND PLANS FOR
IMPROVING PROGRAMS IN GROUP A

Activities	Teacher's Evaluation of Activities			Future Plans for Improving the Program		
	Above Average	Average	Below Average	No Change	Plan to Add to Progn.	Plan to Drop
Baseball	0	0	0	0	0	0
Basketball	8	6	2	14	2	0
Dodge Ball	1	6	5	10	0	2
Soccer	2	5	0	7	0	0
Softball	6	11	0	15	1	0
Speedball	2	2	0	4	0	0
Touch Football	7	7	1	14	1	0
Track and Field	5	9	1	14	1	0
Volleyball	3	8	1	12	0	0
Badminton	1	1	0	2	1	0
Boxing	0	1	0	1	1	0
Horseshoes	3	1	0	4	1	0
Tennis	1	1	0	2	1	0
Tumbling	2	3	4	9	1	0
Wrestling	0	0	0	0	0	0
Calisthenics	3	3	1	7	0	0
Physical Fitness	1	4	0	5	0	0
Social Dance	3	0	0	3	0	0
Square Dance	3	0	0	3	1	0
Adapted	0	0	0	0	0	0
Co-educational	1	1	0	2	0	0
Swimming	0	1	0	1	0	0
Diving	0	0	0	0	0	0
Water Safety Instruction	0	0	0	0	0	0

The evaluation by each teacher of the activities in the program expressed in terms of above average, average, or below average with future plans for improving the programs, is shown in this table. The plans for change were indicated by columns headed, "No Change," "Plan to Add to the Program," or "Plan to Drop." Table XIX includes those schools having a population of from 100-349 boys.

Basketball was rated above average by eight schools; six schools rated it average; while two said it was below average. Fourteen teachers stated that they did not intend to change anything in connection with basketball; two planned to spend more time with it and none indicated plans to drop basketball. Dodge ball was rated above average by one teacher, six rated it as being average, while five believed that it was below average. Ten of the teachers indicated that there were no plans for changing dodge ball, none planned to add dodge ball, but two teachers indicated intentions of dropping it. Dodge ball was the only activity marked in the plans for elimination from the programs of the schools included in this study. Seven schools in Group A had soccer; two of them rated it above average, five as average, and none as below average. Seven schools planned no change and there were no plans to add or drop soccer in the other schools. Six teachers evaluated softball above average, while eleven of them considered it to be average and none rated softball below average. Fifteen teachers had plans for no change and one

planned to add softball, none indicated intentions of dropping. Speedball was judged above average by two teachers and average by two, while there were no indications of it being below average. In the future plans for improving the program, four teachers planned no change and there were no plans to either add or drop speedball. Touch football was evaluated above average by seven teachers and average by seven, and one thought it was below average. Fourteen teachers did not plan to change, and one planned to add it to the program, and there were no indications of plans to drop. Track and field according to the teachers' evaluation was above the average in five instances, average in nine and below average in one. Fourteen teachers stated that there would be no change in the future, one planned to add it to the program, and none were going to drop it.

Three teachers were of the opinion that volleyball was above average; eight said it was average; and one said it was below average. No change in regard to volleyball was expressed by twelve teachers while there were no plans to either add or drop it to other programs. Badminton was considered to be above average by one teacher and average by one, with no one indicating a below average ranking. Two had future plans for no change; one planned to add and none planned to drop it.

Boxing was ranked as average by one teacher, while none of the teachers rated it above average or below average. One teacher did not plan a change and one indicated that it would

be added to the program; there were no plans to drop. Three teachers evaluated horseshoes as above average, one as average, and none as below average. There were no changes planned by four teachers, one planned to add it to the program, while no one intended to drop horseshoes. In the estimation of one teacher, tennis was above average, one said it was average, but no one rated it below average. Future plans included two for no change, one for adding and none for dropping. Tumbling was ranked above average by two teachers, average by three and below average by four teachers. For improving the program, nine of those persons interviewed planned no change, one planned to add tumbling but no one indicated that it would be dropped.

Wrestling was not included in any of the schools in Group A. Calisthenics were rated as above average by three teachers, as average by three and below average by one teacher. Seven of the teachers did not plan to change and there were no plans for either adding or dropping calisthenics. One of the teachers considered physical fitness efforts as above average, while four considered them average; none were of the opinion that they were below average. No change was indicated by five teachers in physical fitness; there were no plans for either adding or dropping. Three teachers evaluated social dance as above average, while there were no ratings for it of either average or below average. Three teachers indicated no change in the future plans in regard

to social dance; there were no plans to either add or drop. Square dance was thought to be above average by three teachers while none of them rated it as average or below average. No changes in square dance were included in the plans of the three teachers, one indicated plans to add it, no one was going to drop square dance.

There was no indication in any of the schools of Group A that there was any effort to supply an adapted program of physical education.

The teachers' evaluation of co-educational activities pointed out that one considered them above average, one average, with none rating them below average. Two teachers stated that there were no plans to change, while there were no plans to either add or drop co-educational activities. Swimming was ranked as average by one teacher of this group, while no teacher ranked it above average or below average. One teacher had no plans for change, while there were no indications of either adding or dropping swimming. Only one school in this grouping had swimming as a part of the activity program. Diving was not a part of the activity program as indicated by schools in this group, nor was water safety instruction included in the program.

The teacher evaluation of activities with plans for improving the programs for those schools comprising Group B is included in Table XX. Group B includes those schools having a male enrollment of from 350-599.

TABLE XX
TEACHER EVALUATION OF ACTIVITIES AND PLANS FOR
IMPROVING PROGRAMS IN GROUP B

Activities	Teacher's Evaluation of Activities			Future Plans for Improving the Program		
	Above Average	Average	Below Average	No Change	Plan to Add to Progm	Plan to Drop
Baseball	0	0	0	0	0	0
Basketball	11	10	1	22	0	0
Dodge Ball	2	9	4	15	1	0
Soccer	1	7	1	10	0	0
Softball	15	4	2	21	0	0
Speedball	1	0	1	2	0	0
Touch Football	11	10	1	22	0	0
Track and Field	8	9	1	18	1	0
Volleyball	6	10	0	16	0	0
Badminton	0	1	0	1	1	0
Boxing	0	4	1	5	1	0
Horseshoes	0	2	0	2	1	0
Tennis	2	1	0	3	2	0
Tumbling	7	3	0	10	1	0
Wrestling	0	1	1	2	0	0
Calisthenics	10	4	2	16	0	0
Physical Fitness	1	3	0	4	0	0
Social Dance	2	0	0	2	0	0
Square Dance	0	0	0	0	0	0
Adapted	0	0	0	0	0	0
Co-educational	2	2	0	4	0	0
Swimming	4	0	0	4	0	0
Diving	0	0	0	0	0	0
Water Safety Instruction	2	0	0	2	0	0

Baseball, square dance, adapted activities for the handicapped, and diving were not included in the programs of the schools in Group B, as shown in Table XX.

Basketball was rated above average by eleven school representatives in Group B, ten ranked it average, while only one rated it below average. Teachers in twenty-two of the schools of this group did not plan changes for basketball and none of them indicated plans for either adding or dropping basketball. Evaluation of teachers of dodge ball showed that two said it was above average, nine said it was average, and four ranked it below average. There were plans for no changes in fifteen of the schools, one planned to add dodge ball to the program and none planned to drop it. Soccer was classed as above average by one teacher, as average by seven and as below average by one. Ten teachers indicated that there were no plans for change concerning soccer, or for either adding or dropping. In regard to the future plans for improving the program, fifteen teachers indicated that softball was above average, four rated it average, and two stated that it was below average. No change was planned in twenty-one of the schools and there were no indications of either adding or dropping softball by those interviewed. Speedball was declared to be above average by one teacher, and below average by one. No change was contemplated by two teachers and there were no teachers who had decided to either add or drop speedball. Eleven teachers evaluated touch football as above average, ten thought it was average, with one stating that it was below average. Twenty-two teachers indicated that there would be no change in football, while there were no plans for

adding or dropping. Track and field was thought to be above average by eight teachers, while nine of them classed it as average and one rated it below average. No changes were planned by eighteen teachers and one indicated plans for adding track and field to the program, with no indications of dropping. Six teachers were of the opinion that volleyball was above average, ten maintained that it was average, and no one indicated that it was below average.

Future plans for improving the program revealed that sixteen teachers were contemplating no change, while there were no indications of intentions either to add or drop volleyball. Badminton was considered to be average by one teacher, while none of the teachers rated it either above average or below average. Plans for improvement pointed out that one teacher was not going to make any changes and one planned to add to the program, while there were no plans for dropping it. Boxing had no ranking of above average, although four teachers stated it was average and one below average. Five of those teachers who had boxing in the program planned no change, one planned to add it and none planned to drop it. Horseshoes was thought to be average by two teachers, but no teacher ranked it as above average or below average. As far as the future plans were concerned, two teachers indicated no change, one planned to add, but no one indicated that horseshoes would be dropped.

Those teachers who included tennis in their programs were in agreement in two cases of it being above average worth; one considered it to be average; but no one ranked it below average. Three teachers planned no change, two were going to add tennis and no one was intending to drop it. The teachers evaluated tumbling as above average in seven instances, average in three, none in below average value. Ten school programs had no plans for change by those in charge, one indicated a willingness to add it, while there was no one who planned to drop it. Wrestling was judged to be average and below average in one instance each, but there were no rankings as above average. Future plans included two with no change, but there were no indications of either adding or dropping wrestling. Calisthenics were classed as above average in ten schools, as average in four, and as below average in two. Sixteen of the schools in this group did not have plans for changes and there were no expressions of plans to either add or drop. Physical fitness was rated as above average in one school, as average in three, and none for below average. There were four schools that did not intend to make a change while there were none who were willing to either add or drop physical fitness procedures. Social dance, as a physical education activity, was classed as above average by two teachers, while there were no ratings as average or below average. The two schools having social dance in this group planned no change in the program and none of the schools

indicated that they would either add or drop social dance. Co-education activities were judged to be above average by two teachers and average by two with no rating of below average. The four schools with co-educational activities planned to make no change; none of the others indicated that there would be any additions or deletions in regard to co-educational activities. The teachers of this group evaluated swimming as above average; none classed it either average or below average. The four schools that had swimming did not contemplate change; none of the teachers were interested in adding or dropping it. The teachers rated water safety instruction as above average; there were no other ratings for it. Those two schools offering water safety instruction planned no change; there were no indications or intentions to add or drop it.

In Table XXI is included the schools in Group C and it shows the teacher evaluation of activities in the program and also indicates the plans for improving those programs. Group C included those schools having an enrollment of 600-1,400 boys.

Group C schools, as shown in Table XXI, did not include in their activity programs baseball, horseshoes, social dance, square dance, adapted activities for those with a handicap, or co-educational activities.

The teachers evaluation of basketball ranked it above average in eight schools, average in seven, with no one classing it below average. None of the fifteen schools in this

TABLE XXI

TEACHER EVALUATION OF ACTIVITIES AND PLANS FOR
IMPROVING PROGRAMS IN GROUP C

Activities	Teacher's Evaluation of Activities			Future Plans for Improving the Program		
	Above Average	Average	Below Average	No Change	Plan to Add to Progm	Plan to Drop
Baseball	0	0	0	0	0	0
Basketball	8	7	0	15	0	0
Dodge Ball	2	5	4	11	0	0
Soccer	2	3	1	6	0	0
Softball	4	11	0	15	0	0
Speedball	7	3	0	4	0	0
Touch Football	7	8	0	15	0	0
Track and Field	3	4	1	8	0	0
Volleyball	3	9	0	11	1	0
Badminton	1	0	0	1	0	0
Boxing	1	0	0	1	0	0
Horseshoes	0	0	0	0	0	0
Tennis	1	0	0	1	0	0
Tumbling	4	5	1	10	0	0
Wrestling	1	0	1	2	0	0
Calisthenics	8	3	0	11	0	0
Physical Fitness	4	4	0	8	0	0
Social Dance	0	0	0	0	0	0
Square Dance	0	0	0	0	0	0
Adapted	0	0	0	0	0	0
Coeducational	0	0	0	0	0	0
Swimming	9	2	0	11	0	0
Diving	4	1	0	5	0	0
Water Safety Instruction	3	2	0	5	0	0

group planned a change. Teachers in two of the schools ranked dodge ball as above average, five of them classed it as being average, while four had dodge ball as a below average

activity. Eleven of the teachers indicated that there would be no change in their plan and there was neither add nor drop indicated. Evaluation by teachers of soccer showed that two classified it above average, while three thought it was average and one thought it was below average. Six teachers indicated that there were no plans for change concerning soccer, while there were no statements of plans to add or drop this sport. In regard to the classification of softball, four teachers said it was above average, eleven said it was average, and none said it was below average. None of the fifteen schools in this group had plans for change. Speedball was rated by one teacher as being above average with three of them stating that in their opinion it was average; there were no teachers who classed it as below average. Four of the teachers did not have plans for change regarding soccer and none planned to add or drop it. Of the fifteen Group C schools, seven ranked touch football as above average and eight as average, while there were none who thought it below average. None of the fifteen teachers had made plans to make any changes in touch football.

Track and field was judged by three teachers to be above average, average by four teachers and below average by one teacher. Eight of the teachers indicated that there were no plans for alterations concerning track and field, while there were no indications of plans to either add or drop it. Three teachers were of the opinion that volleyball was above

average; nine maintained that it was average; and, no one indicated that it was below average. No changes were contemplated by eleven teachers in connection with this activity, while one teacher planned to add it to the program and no one wished to drop it. Badminton was included in the program of one school and that teacher rated it as above average and did not plan any change.

Boxing was a part of the program in one school and it was rated above average with no intentions of change. Tennis was in one school and rated above average with no plans for change. Tumbling was considered above average by four teachers, average by five and below average by one teacher. There were no plans for alteration in ten schools and no one expressed a desire to either add or drop this activity. In the two institutions offering wrestling, one teacher classed it as above average, none average, and one teacher indicated a judgment of below average. These two schools did not plan for any change concerning wrestling. Eight teachers evaluated calisthenics as above average, three as average and none as below average. There were eleven teachers who indicated that there were no plans for change and there were no schools that had plans to either add or drop calisthenics. Responses from eight schools concerning their physical fitness programs showed four teachers rating it as above average and four as average; there were no changes indicated by these teachers. Swimming was evaluated by nine teachers as being above average,

two of them classing it as average, with no one stating that it was considered below average. There were eleven schools that had swimming in their programs but planned no change, none of the teachers indicated that it would either be added or dropped. Diving was considered to be above average in the estimation of four teachers, one thought it was average and no one decided that it was below average. There were five schools that had no plans for making changes and there were none that planned to add or drop swimming. Water safety instruction was classified above average by three teachers, two of them ranked it as average, while none of the teachers placed it below average. These five schools having water safety instruction had no plans for future changes.

Included in Table XXII are the evaluations by teachers of the activities with plans for improving the program in all three of the Groups A, B, and C.

A composite of the three groups of schools was shown in Table XXII, in which an over-all view of the teacher evaluations of the activities and plans for future improvement of the programs are reviewed. There were two areas for which none of the schools provided: baseball and an adapted physical education program to meet the needs of those youngsters with some kind of disability.

The composite of the teacher evaluations of basketball indicated that twenty-seven of them considered it an above

TABLE XXII

**COMPOSITE OF TEACHER EVALUATION OF ACTIVITIES AND PLANS
FOR IMPROVING PROGRAMS IN GROUPS A, B, AND C**

Activities	Teacher's Evaluation of Activities			Future Plans for Improving the Program		
	Above Average	Average	Below Average	No Change	Plan to Add to Progm	Plan to Drop
Baseball	0	0	0	0	0	0
Basketball	27	23	3	51	2	0
Dodge Ball	5	20	13	36	1	2
Soccer	5	15	2	23	0	0
Softball	25	26	2	51	1	0
Speedball	4	5	1	10	0	0
Touch Football	25	25	2	51	1	0
Track and Field	16	22	3	40	2	0
Volleyball	12	27	1	39	1	0
Badminton	2	2	0	4	2	0
Boxing	1	5	1	7	2	0
Horseshoes	3	3	0	6	2	0
Tennis	4	2	0	6	3	0
Tumbling	13	11	5	29	2	0
Wrestling	1	1	2	4	0	0
Calisthenics	21	10	6	34	0	0
Physical Fitness	6	11	0	17	0	0
Social Dance	5	0	0	5	0	0
Square Dance	3	0	0	3	1	0
Adapted	0	0	0	0	0	0
Coeducational	3	3	0	6	0	0
Swimming	12	3	0	15	0	0
Diving	4	1	0	5	0	0
Water Safety Instruction	5	3	0	7	0	0

average activity, twenty-three teachers rated it as average, and three believed it to be below average. Fifty-one schools had made no arrangements for changes in this sport, two

indicated that basketball would be added, while none of the instructors planned to drop it. Dodge ball was considered to be above average in five cases, average in twenty instances, and below average in thirteen. Thirty-six schools did not plan to change, one planned to add it, while two schools planned to drop dodge ball. Dodge ball was the only activity that teachers indicated would be dropped from the program. Soccer was evaluated by the teachers as above average in five schools, as average in fifteen and below average in two schools. No changes were in the making by twenty-three teachers and no one indicated plans to either drop or add it. Softball was judged to be above average by twenty-five instructors and average by twenty-six of them with two indicating that in their opinion softball was below average. Fifty-one of those teachers who had softball in the program planned no change, one planned to add it to the course offerings, but no one planned to drop it. Teachers indicated that speedball was above average in four cases, average in five, and below average in one instance. Ten schools did not intend to change speedball, while there were no indications of adding or dropping it.

There was equal judgment concerning touch football in that in twenty-five schools it was considered to be above average and in twenty-five of them it was rated as average, while in two schools touch football was mentioned as being below average. There were no changes indicated in fifty-one

schools in regard to touch football, but one school planned to add it and none of them planned to drop it. Those teachers who included track and field as a part of the activity program decided that it was above average in sixteen cases, average in twenty-two and below average in three schools. Forty schools had no plans for change, two indicated that they would like to add it, but none planned to drop track and field.

Volleyball was judged to be above average by twelve teachers, average by twenty-seven, and below average by one. Future plans included thirty-nine schools with no change, one with plans to add it, while none indicated that it would be dropped. Badminton was classified as above average by two teachers, as average by two teachers, and none rated it below average. Four of the teachers in these schools planned no change for badminton, two were going to add it, but there were no indications of anyone dropping it. Of the seven schools that included boxing in their programs, one teacher rated it above average, five placed it as average, and one thought it was below average. Seven teachers had not made plans for changing in connection with boxing, two planned to add it to the program, no one was going to drop it.

Horseshoes were rated above average by three teachers, as average by three teachers, and none thought that it was below average. Six teachers stated that they did not intend to make changes in connection with horseshoes, two planned to add this activity to the program, and none indicated that

they would drop it. Teachers in four schools were of the opinion that tennis was above average, two teachers thought it was average, and none of them rated it below average. The future plans of six teachers did not include changes in tennis, three of them planned to add it to the program, while none of them were going to drop it.

Tumbling was classified by the teachers as an above average activity, eleven of them considered it as average, while five instructors rated tumbling below average. Program planning did not include changes in twenty-nine schools with respect to tumbling, two teachers planned to add it, but none indicated that it would be dropped. Wrestling was ranked as above average by one teacher, as average by one teacher, and as below average by two teachers. Four of these teachers planned no change, none planned to either add or drop. Calisthenics, according to twenty-one teachers, were an above average activity, while ten of them considered it as average and six judged it as below average. In program planning, thirty-four teachers stated that no changes were contemplated, and there were no statements regarding the adding or dropping of this activity.

Physical fitness was evaluated by six teachers as being above average, eleven of them classed it as average, but there were none who believed it to be below average. Seventeen teachers planned no change in connection with physical fitness; there were no indications of either adding or dropping it.

Five schools included social dance in their programs and all five of the teachers rated it as above average with no plans indicated for changing. Three schools had square dance and it was rated as an above average activity; three indicated no change, but one teacher had plans for adding it to the program. Co-educational activities were included by six schools; three teachers said that this was above average in relation to the total program, and three of them ranked it as average. None of the teachers in six schools had intentions of changing and there were no indications of it being either added or dropped from the course of study in these schools.

Twelve instructors rated swimming as above average; three of them judged swimming as being average and no one placed it below average. Not one of the schools included plans for changing any part of the swimming program. Five schools offered diving and four teachers rated it as an above average activity, with one judging it average. No changes were to be made in this phase of the program. Water safety instruction was ranked as above average by five teachers, as average by three of them, while no one thought it was below average in value. There were no future plans for changes in seven of the schools and none of the teachers had plans for either adding or dropping this activity.

The four games that were previously mentioned as the ones dominating the activity programs of the fifty-three schools

in this study were rated higher by the teachers than any other sports or games; there were neither plans for change nor indications for dropping these activities. Basketball was considered to be above average by twenty-seven teachers and as average by twenty-three. Softball was judged above average by twenty-five teachers and as average by twenty-six of them. Touch football was classified as above average by twenty-five instructors and as average by twenty-five of them. Track and field was evaluated as above average by sixteen teachers and as average by twenty-two of them. Below average classifications were expressed by three teachers for basketball; by two teachers for softball, by two of them for touch football; and by three teachers in track and field.

Teachers placed considerable value on calisthenics. Twenty-one teachers evaluated calisthenics as above average, ten as average, and six rated them as below average.

Summary

Although some teachers rated the contributions of a few of the activities as below average in relation to the total program, there were indications of dropping activities or planning to improve the existing programs in only one case. Two teachers planned to drop dodge ball.

The preceding tables presented the teachers' evaluation of the activities in the programs for three groups. Included for evaluation purposes were the activities, the teacher's

evaluation as to whether the activities were above average, average, or below average, and future plans for improving the program.

The four dominating team games were touch football, basketball, softball, and track and field. These were the activities that were consistently rated high by the teachers and the ones for which no changes were indicated.

Time Allotment for the Various Activities

The next step, after compiling the information concerning the status of boys' physical education programs showing those activities as evaluated by the teachers with indications of the plans for future improvement, was to examine the amount of time devoted for each game or sport by semesters for each of the three groups, A, B, and C.

Time Allotment in Schools of Group A

In Table IXIII there is an identical listing of activities as that used in Principle One of the evaluating instrument with additional columns indicating the blocks of time devoted to the activities.

The schools in Group A did not offer baseball, physical fitness, social dance, adapted activities, swimming, diving, or water safety instruction, hence there was no indication of time allotment.

Since there were a few activities that were not offered in the definite limits specified by number of weeks, a

special column lists those activities that were offered either daily in the program or were confined to rainy days only. Under the "Special" column for institutions in Group A, dodge ball was a rainy day activity in nine schools. One school had volleyball during inclement weather, another school had the following activities for rainy day participation: boxing, horseshoes, wrestling, and co-educational sports. In two schools there was indicated use of tumbling as a rainy day pursuit. Three of the schools in this group had calisthenics on rainy days; calisthenics was the only activity mentioned as being included daily in the program.

During the first semester there were twelve different activities offered. Basketball was allotted three weeks by five of the schools; six weeks by five schools; nine weeks by one school; and twelve weeks by three. Dodge ball was included for three weeks by one school and for six weeks by one school; there was no other time set aside in the first semester by any of the schools for this game. During the first semester four of the schools devoted three weeks to soccer with further additional time not indicated.

None of the schools spent as little as three weeks on touch football in the first semester; eight schools had it for six weeks; five schools offered it for nine weeks; while two of them devoted twelve weeks to this sport. One school in Group A devoted three weeks during the first semester to track and field.

First semester time allotment for volleyball revealed that three schools had it for three weeks and three schools offered it for six weeks, with no other time indicated. Boxing was a first semester offering in one school, with no other institution devoting time for it. The fall term had three weeks for horseshoes in three schools, with none of the others setting aside time for it. First term tennis was held in one school for three weeks, other schools did not have it at all during this time. One school devoted three weeks for tumbling in the first term but none of the other schools had it at that period.

Square dance was included for three weeks in one school in the first term only. In two schools time was allotted for co-educational sports in the fall but not at any other time.

For the second semester there were twelve activities offered with several games and sports repeated. Basketball used three weeks in four of the schools; six weeks in five of them; there were no other indications of time spent on this game. There were two schools that offered soccer the second term for three weeks, while one offered it for six weeks. Second semester touch football was found for six weeks in two schools and for nine weeks in one school.

Of the schools in Group A, one had softball for three weeks, eleven schools had it for six weeks, three had it for nine weeks, and one school had softball for twelve weeks

during the spring term. There were three schools devoting three weeks to speedball, one school had it for six weeks in the second semester. The spring term included track and field in eight schools for three weeks, in three of the schools for six weeks, while three schools had it for nine weeks.

Volleyball occupied three weeks in five schools and six weeks in four schools for the second semester. Badminton was offered in one school and there were three weeks devoted to it during the spring semester. Second semester boxing was included in the program of one school with three weeks set aside for it. Horseshoes were offered in the spring term by two schools for three weeks. One school of the group had tennis as a second semester offering for three weeks. Five schools devoted three weeks to tumbling during the second half of the school year.

The following activities were offered by the schools of Group A in both the fall and spring semesters: basketball, soccer, touch football, track and field, volleyball, boxing, horseshoes, tennis and tumbling.

Three weeks was the time used most often for a particular activity, with twenty-three schools using it the first semester and thirty-three using it the second. Six weeks was the next block of time used most often with seventeen schools devoting that much time the first semester and twenty-seven using that amount the second semester. Nine weeks blocks of time were used more often than twelve weeks, six schools the first

terms used nine weeks, while seven schools used the same amount during the second term. Twelve weeks were employed in block form by five schools during the fall term, while only one school used that amount in the spring term.

Time Allotment for Schools in Group B

In Table XXIV are included those schools in Group B showing the time allotment for each activity per week by semesters.

The activities not offered by schools in this group, as indicated in Table XXIV, include baseball, speedball, badminton, tennis, physical fitness, adapted activities, and diving. Under the "Special" column, which includes those games and sports presented either on rainy days or daily, dodge ball was a rainy day game in fifteen schools of this group. One school had volleyball on rainy days. The inclement weather offering of two schools was boxing; while three schools had tumbling at this time. Calisthenics were used on rainy days by five schools and two schools had co-education activities set aside for rainy days. Horseshoes were a daily occurrence in one school while eleven schools held calisthenics daily.

Basketball was a first semester offering for three weeks by six schools, for six weeks by seven of the schools, nine weeks by two schools, and twelve weeks in two of the schools. Dodge ball was included in the program for six weeks by one

TABLE XXIV

TIME ALLOTMENT FOR EACH ACTIVITY BY WEEK AND BY SEMESTERS FOR GROUP B

Activities	Special		First Semester				Second Semester			
	Rainy Day	Daily	3 Wks	6 Wks	9 Wks	12 Wks	3 Wks	6 Wks	9 Wks	12 Wks
Baseball	0	0	0	0	0	0	0	0	0	0
Basket Ball	0	0	6	7	2	2	2	7	2	0
Dodge Ball	15	0	0	1	0	0	0	0	0	0
Soccer	0	0	3	2	0	0	1	3	0	0
Softball	0	0	0	0	0	0	3	0	0	0
Speedball	0	0	0	0	0	0	12	3	3	4
Touch Football	0	0	2	10	4	6	0	0	0	0
Track and Field	0	0	2	2	0	0	9	1	0	0
Volleyball	1	0	6	2	1	0	3	3	3	1
Badminton	0	0	0	2	0	0	0	0	0	0
Boxing	2	0	3	0	0	0	0	0	0	0
Horseshoes	0	1	0	0	0	0	0	0	0	0
Tennis	0	0	0	0	0	0	0	0	0	0
Tumbling	3	0	7	1	0	0	2	0	0	0
Wrestling	0	0	2	0	0	0	0	0	0	0
Calisthenics	5	11	0	0	0	0	0	0	0	0
Physical Fitness	0	0	2	0	0	0	0	0	0	0
Social Dance	0	0	0	0	0	0	0	0	0	0
Square Dance	0	0	0	0	0	0	1	0	0	0
Adapted	0	0	0	0	0	0	0	0	0	0
Co-educational	2	0	0	0	0	0	0	0	0	0
Swimming	0	0	1	3	0	0	1	3	0	0
Dividing	0	0	0	0	0	0	0	0	0	0
Water Safety Instruction	0	0	2	0	0	0	0	0	0	0

school with no other time devoted to this game by the other schools. The schools in this group had soccer for three weeks in three of the schools, for six weeks in two of them, during the first term.

The fall term was devoted to three weeks of touch football in two schools, for six weeks by ten of them, for nine weeks by six schools, and for twelve weeks by four of the schools. There were two schools that included track and field for three weeks during the first half of the school year. There were six schools that offered volleyball during the first semester for three weeks, two schools had it for six weeks, and one school had volleyball for nine weeks. Boxing was a three weeks unit in three schools during the fall term.

Group B schools, during the first semester, devoted three weeks to tumbling in seven of the schools, for six weeks in one school. There were three weeks set aside for wrestling during the first part of the school year by two institutions. Social dance was a three weeks offering by two schools for the first semester. Swimming during the fall term was indicated as a three weeks unit by one school and as a six weeks unit by three schools. Water safety instruction was held for three weeks by two of the schools during the first semester.

For the second semester, two schools had three weeks units in basketball, seven schools had it for six weeks, and two schools had basketball for nine weeks. Soccer was included in the second half of the school year for three weeks

by one school and for six weeks for three schools. Softball received attention for three weeks in three schools, for six weeks in twelve schools, for nine weeks in three of the schools, and for twelve weeks in four schools as a spring term sport.

One of the schools offered a six weeks unit on touch football during the second semester. Track and field occupied three weeks in nine schools, six weeks in three schools, for nine weeks in three schools, and for twelve weeks in one school as a spring term activity. During the second semester there were three schools devoting three weeks to volleyball, three schools had it for six weeks, and two schools had volleyball for nine weeks. Three weeks were set aside by two schools for a spring offering of tumbling.

A single school included square dance for three weeks during the second semester. Swimming was given for three weeks by one school and for six weeks by three schools during the spring term.

Those activities offered during the fall and spring terms by Group B schools were: basketball, soccer, softball, touch football, track and field, volleyball, tumbling, and swimming.

During the first semester schools in Group B used the three weeks time allotment most often as is indicated by the thirty-six schools; six weeks blocks of time were used by twenty-six schools, nine weeks sections of time were employed by nine schools, and twelve weeks were used by six schools. The second semester time allotment placed the six weeks unit

as the one used most by thirty-six schools, with twenty-two schools using a three weeks arrangement of time, ten schools used the nine weeks block, and five schools favored twelve weeks blocks of time.

Time Allotment for Schools in Group C

In Table XXV are included the schools of Group C and it indicates the amount of time in weeks devoted to the various activities by semesters for the physical education program.

The activities not included in the activity programs of the schools in Group C, as shown by Table XXV, include: baseball, badminton, horseshoes, tennis, social dance, square dance, adapted activities, co-educational sports, and diving.

Dodge ball was listed as a rainy day game under the "Special" column by eleven schools, with calisthenics the only other activity held by two schools on inclement days. Calisthenics were daily requirements in six schools.

During the first semester basketball was offered for three weeks by five schools, for six weeks by eight schools; none of the schools in Group C had it for nine or twelve weeks blocks of time. Soccer was a three weeks unit in the fall term in four schools. Two schools included softball in the first term for three weeks and one school had it for six weeks. There were three schools that had speedball for three weeks during the first half of the school year and one school devoted six weeks to it. A fall term offering of touch football

indicated that five schools spent three weeks on it, seven schools had it for six weeks, one school had touch football for nine weeks, and two institutions had it for twelve weeks.

Track and field was a first semester activity in two schools for a three weeks period. There were nine schools spending three weeks on volleyball, with none of the other schools devoting any time to this game. Six schools used three weeks units in tumbling of the Group C schools. One school in this group had calisthenics for a nine weeks period. Swimming was included in the program for three weeks by two schools and for six weeks by nine schools. There were six schools that had six weeks units in water safety instruction.

For the second semester activity five schools had basketball for three weeks, three schools had it for six weeks, and one school had a twelve weeks unit of basketball. A single school had a three weeks period set aside for soccer. Softball was in the program of four schools for three weeks during the spring term; in six schools there were six weeks blocks of time, in four of them there were nine weeks, and in one school there was twelve weeks devoted to softball. One three weeks period was spent by one school in speedball during the second semester.

There were five schools in this group with three weeks units in touch football for the second half of the school year and one school using six weeks. Track and field was a spring

term offering for three weeks in five schools, for six weeks in one school, and for nine weeks in two of the schools.

During the second semester volleyball was included in the program by nine schools for three weeks, and by two schools for six weeks. Boxing was a three weeks unit in one school for the spring term. There was one school that included wrestling for a three weeks period during the second semester. Ten schools had swimming during the spring semester for six weeks. There were three schools with three weeks units in water safety instruction.

Basketball, soccer, softball, speedball, touch football, track and field, volleyball, swimming, and water safety instruction were the activities offered during the fall and spring semesters by the schools in Group C. While the fall term was in session, Group C schools used the three weeks period of time in thirty-eight schools, the six weeks block of time in thirty-one schools, nine weeks in two of the schools, and twelve weeks in two schools. The second semester time allotment placed the three weeks unit as the one most often used as indicated by the thirty-two schools; Six weeks block of time was employed in twenty-six schools; nine weeks in six schools, and twelve weeks in two schools.

Time Allotment for All Schools

The time allotment for all three groups of schools is shown in the composite Table XXVI, indicating each activity by weeks and by semesters.

Table XXVI, which is a composite of Tables XXIII, XXIV, and XXV, indicated that baseball was not included in the activity programs of the schools in Groups A, B, and C. There were no efforts to provide an adapted physical education program to meet the needs of those with a handicap. None of the schools had diving in connection with their swim programs.

Thirty-five of the fifty-three schools indicated that dodge ball was used as a rainy day activity. Two schools used volleyball as an inclement weather activity. Boxing filled in for rainy day endeavor in three schools. One school used horseshoes for this purpose. Tumbling was placed in this classification for five schools, while one school used wrestling for the same purpose. Ten teachers said that calisthenics were used on rainy days. There were three schools using coeducational sports as a rainy day substitute for the regular program. There were two activities mentioned in the composite table that were used daily; one school had horseshoes while twenty-one schools had calisthenics every day.

For a first semester activity sixteen schools had basketball for three weeks; twenty of them had it for six weeks; three schools had basketball for nine weeks; while five schools had that game for twelve weeks. Dodge ball was offered for three weeks in one school and for six weeks in two schools as a part of the fall term program. Soccer was in the first semester with three weeks set aside in seven schools and for six weeks in two schools.

A first term offering for three weeks in softball was found in two schools and for six weeks in one school. Speedball in three schools was presented for three weeks and in one school for six weeks. Fall term activities included three weeks for touch football in seven schools, six weeks in twenty-five schools, nine weeks in eleven schools, and twelve weeks in eight of the schools. There were five schools offering track and field in the first semester for three weeks. Volleyball was included in nine schools the first term for three weeks periods, in five schools for six weeks, and in one school for nine weeks.

A single school had badminton in the program and three weeks were devoted to it in the first semester. Boxing was a fall term activity in four schools for a period of three weeks each. Three weeks were spent in three schools the first semester pitching horseshoes. Tennis was a three weeks affair in one school the first part of the school year. Fourteen schools had tumbling for three weeks during the fall term with one school spending six weeks during this time on it.

Two schools placed wrestling in the first semester for three weeks units. Social and square dance were a part of the program in two schools during the fall semester for three weeks each. Co-educational sports occupied three weeks in two schools during the first half of the school year. Three schools established three weeks units for swimming in the fall

term, while twelve schools had it for six weeks. Water safety instruction was a three weeks unit in eight schools.

The second term included basketball for three weeks in eleven schools, six weeks in fifteen schools, for nine weeks in two schools, and twelve weeks for one school. Soccer was an offering in two schools for three weeks and in three schools for six weeks, while the second term was in session. There were eight schools that included softball for three weeks the second semester, twenty-nine schools for six weeks, ten of the schools for nine weeks, and six of them for twelve weeks.

Speedball was a spring term sport in four schools for three weeks and in one school for six weeks. Touch football was found in the second semester for three weeks in five schools, for six weeks in four of the schools, and for nine weeks in one school. Twenty-two schools offered track and field during the second semester for a period of three weeks, eight schools for nine weeks, and one school used twelve weeks. Volleyball was a second term game in seventeen schools for three weeks, nine schools for six weeks, and two schools for nine weeks.

There was one three weeks unit of boxing in one school during the second half of the school year. Two schools had horseshoes in the program during the second term for three weeks. Tennis was conducted in one school for three weeks during the spring term. Tumbling was held in ten schools the second semester for a three weeks block of time. Wrestling

was a three weeks unit in one school for the second semester. Swimming was allotted six weeks in thirteen schools in the spring term and for three weeks in one school. Water safety instruction was provided in three schools for three weeks each.

The rainy day programs of all the schools in the three different groups were not planned; but activities were substituted for the regular ones when weather conditions did not permit outside activity. A large portion of the time available was allotted to the four sports that were previously shown to dominate the activity programs of these schools. Those sports were: basketball, softball, touch football, and track and field. With the amount of time set aside for these games it was impossible to offer a wide variety of activities because there was insufficient time left.

Physical fitness was not indicated in the time allotment because those schools including it had arranged time for it not in terms of days, weeks or rainy days, but had established certain periods of time during the fall term and/or certain periods during the spring term. There was no indication of a pattern or trend by any group or even by separate schools regarding the time set aside for administering the physical fitness tests.

Summary

The preceding tables have shown the time allotment for each activity in blocks of time for both the first and second

semesters. None of the schools in the study had baseball or an adapted physical education program. Apparently there were no planned rainy day programs in the schools; on those days when weather forced an inside activity of some sort, dodge ball was used by most schools for this purpose. Other activities used during inclement weather were volleyball, boxing, tumbling, calisthenics, and co-educational sports. Twenty-one of the teachers in these schools indicated that they required calisthenics every day.

The time allotted for basketball, softball, touch football, and track and field practically eliminated the possibility of offering a program of a wide variety of activities in the programs of the schools visited.

There was no indication of a trend in the time allotted for the administering of physical fitness tests. Usually these tests were given once during the fall semester and then again during the spring semester, but no pattern was indicated from examination of the data collected.

Evaluation of Activity Programs

Using the same groups based upon the male enrollment, i.e., Group A (100-349); Group B (350-599); and Group C (600-1,400), the scores attained by each school on each of the ten principles of the evaluation scale were compared. The individual schools are not identified by name but are designated by group and by number, for instance, A-1 would represent the

first school in the 100-349 enrollment size. The rest of the schools are assigned a number and a letter according to size.

Evaluation of Activity Programs in
Schools in Group A

The scores and mean scores attained by schools in Group A on the ten divisions of the evaluation scale were shown in Table XXVII.

The mean score attained by schools in Group A as shown in Table XXVII on Principle One was 3.3. The total possible score was 8.0. This seems to indicate that, on the whole, these schools did not provide a wide variety of activities with opportunities to acquire a number of motor skills. The schools in this group did not offer programs that adhered to Principle Two's premise that the physical education program is an integral part of the total educational effort. Fewer than half of the schools in Group A had a program to serve all pupils, giving adequate opportunity to those who need physical education most, as stated in Principle Three, which was revealed by the mean of scores of the principles of 4.6. A mean score of 3.1 for Principle Four indicated that the physical education programs of the schools in Group A did not exhibit an awareness of the unitary nature of man. The mean 2.9 on Principle Five by the schools in this group is indicative of the lack of a course of study which is educationally sound, based upon the interests, needs, purposes, and capacities of the youth it serves.

TABLE XIVII
SCORES ATTAINED BY SCHOOLS IN GROUP A ON THE TEN
DIVISIONS OF THE EVALUATION SCALE

School	Principle										Total Score	Mean of Scores
	1	2	3	4	5	6	7	8	9	10		
A-1	5	5	6	3	4	5	8	2	5	0	43	4.3
A-2	4	1	4	3	1	0	4	1	5	0	19	1.9
A-3	3	0	6	3	1	2	3	1	6	0	25	2.5
A-4	1	1	2	1	0	1	2	0	5	0	13	1.3
A-5	2	3	3	2	3	2	1	2	3	0	21	2.1
A-6	3	2	6	3	2	3	4	1	6	0	30	3.0
A-7	5	6	5	5	6	3	4	1	2	0	37	3.7
A-8	2	0	5	2	2	2	3	1	6	0	23	2.3
A-9	7	4	4	5	4	4	4	0	1	1	30	3.0
A-10	3	2	3	4	3	6	4	2	5	0	40	4.0
A-11	6	6	4	4	3	1	6	1	4	0	37	3.7
A-12	7	4	6	1	6	1	9	1	5	0	38	3.8
A-13	5	5	6	4	4	3	5	2	4	0	38	3.8
A-14	3	1	5	4	4	4	4	2	6	0	31	3.1
A-15	5	1	5	2	3	6	4	1	6	0	41	4.1
A-16	2	1	3	6	2	1	3	0	6	0	20	2.0
Mean of Scores for Prin- ciples	3.3	2.9	4.6	3.1	2.9	3.2	4.1	1.1	4.7	.06	30.4	

The mean of scores of 3.2 on Principle Six is less than half of the possible score. This would seem to indicate that the physical education programs for schools in Group A were not very well designed to combat sedentary living or promote physical fitness. In the rating of Principle Seven, the schools in Group A had a mean of scores of 4.1 which reveals an almost halfway effort to develop physical education possibilities by encouraging the wise use of leisure time and supplementing community facilities for joint recreational purposes. Physical education program continuity which creates the best possible teaching-learning situation was very low in the schools of this group as was indicated by the mean of scores of 1.1 for Principle Eight. The mean of scores by schools in Group A, which was 4.7, indicated that the physical education program and staff received some administrative support, which is covered by Principle Nine. Although there was a rather high indication of the amount of administrative support, the schools were very low in the mean of scores for Principle Ten, as shown by .06, which is evidence that basic instruction was not provided for all students. The mean of the total scores for Group A was 30.4; this would point out the fact that the schools of this category are not operating their physical education programs to a high degree of efficiency, as 30.4 is only 38 per cent of the maximum potential.

Evaluation of Activity Programs in
Schools in Group B

The scores and mean of scores attained by the schools in Group B on the ten divisions of the evaluation instrument are shown in Table XXVIII. The efforts to provide a program offering a wide variety of activities, with opportunities for acquiring a number of motor skills by the twenty-one schools in this group did not rank very high as shown by the mean of scores on Principle One of 3.3, as shown in Table XXVIII. The physical education program was not considered as an integral part of the total educational effort of the schools in this group on Principle Two as indicated by the mean of scores of 2.9. The schools in Group B did not have programs of physical education to serve all pupils; programs that gave adequate opportunity to those who need physical education most were absent, as stated in Principle Three. This short coming was indicated by the mean of scores of 4.5. The conduct of the physical education programs of schools in this group did not exhibit much awareness of the unitary nature of man as is shown by the mean of scores of 3.2 for Principle Four. The mean of scores on Principle Five in Group B was 2.8 and reveals the lack of a course of study in these schools which is educationally sound, based upon the interests, needs, purposes, and capacities of the youth it serves. The mean score of 2.8 is just over one-fourth of the possible mean score, indicating that the physical

TABLE XXVIII
 SCORES ATTAINED BY SCHOOLS IN GROUP B ON THE TEN
 DIVISIONS OF THE EVALUATION SCALE

School	Principle										Total Score	Mean of Scores
	1	2	3	4	5	6	7	8	9	10		
B-1	5	4	5	4	3	4	4	4	4	2	35	3.5
B-2	5	5	6	4	3	5	4	1	5	2	38	3.8
B-3	4	5	6	3	3	2	1	0	5	1	32	3.2
B-4	5	4	6	3	3	2	3	0	5	1	25	2.5
B-5	4	4	6	3	3	2	1	2	5	3	33	3.3
B-6	0	3	6	4	5	3	2	2	5	2	27	2.7
B-7	2	4	6	4	4	3	4	2	5	2	33	3.3
B-8	5	4	6	4	1	4	4	2	5	1	34	3.4
B-9	5	4	5	3	3	1	4	2	2	0	34	3.4
B-10	0	1	5	3	2	1	4	2	6	0	22	2.2
B-11	5	6	5	5	5	3	3	1	5	2	39	3.9
B-12	4	2	4	5	2	3	5	1	5	0	30	3.0
B-13	4	4	2	4	5	4	3	2	5	0	36	3.6
B-14	5	2	5	4	3	4	2	1	4	0	29	2.9
B-15	3	1	4	2	3	4	2	1	4	0	27	2.7
B-16	2	1	4	2	3	1	6	0	2	0	18	1.8
B-17	0	1	2	2	0	1	6	0	3	0	9	.9
B-18	0	1	2	2	0	1	2	0	3	0	15	1.5
B-19	0	1	2	2	0	1	2	0	4	0	18	1.8
B-20	0	1	2	3	0	2	5	0	4	0	17	1.7
B-21	0	1	3	3	0	6	2	3	5	2	47	4.7
B-22	7	3	5	6	3	7	5	3	4	3	44	4.4
Mean of Scores for Prin- ciples	3.3	2.9	4.5	3.2	2.3	2.8	3.4	1.0	4.9	1.0	29.7	

education program was not very well designed to combat sedentary living or to promote physical fitness as shown by the replies of the teachers in the schools of this group. In the rating of Principle Seven, the Group B schools had a mean of scores of 3.4 which reveals little effort to develop physical education possibilities by encouraging wise use of leisure time and by supplementing community facilities for joint recreational purposes. Physical education program continuity, in order to provide the best possible teaching-learning situation was not done to a very high degree by the schools of this group as is shown by the mean of scores of 1.0 for Principle Eight. The mean of scores by schools in Group B of 4.9, indicated that the physical education program and staff received a rather high degree of administrative support, which is the text of Principle Nine. While there was a comparatively high indication of administrative support in Principle Nine, the schools of this group had very low mean of scores for Principle Ten of 1.0, which points out that basic instruction was not provided for all students.

The mean of the total scores for Group B was 29.7. This would indicate that the schools in the group were operating their physical education activity programs at 37.1 per cent of the maximum potential.

Evaluation of Activity Programs in
Schools of Group C

The scores and mean of scores attained by the schools in Group C on the ten divisions of the evaluation instrument are shown in Table XXIX. The efforts to provide a program offering a wide variety of activities, as stated in Principle One, did not rank very high for the fifteen schools in this group. Scoring Table XXIX produced a mean of scores on Principle One of 3.7. The physical education program seemed to lack consideration as being an integral part of the total educational effort of most of the schools. The mean of scores in this group was 2.3. The schools in Group C did not appear to have an adequate program of physical education which would serve all pupils, as stated in Principle Three. This is substantiated by the mean of scores for this group of 4.8. The conduct of the physical education programs of schools in this group did not exhibit much awareness of the unitary nature of man as is shown by the mean of scores of 2.9 for Principle Four. The mean of scores on Principle Five in Group C was 2.3 and revealed the lack of a course of study in these schools which was educationally sound, based upon the interests, needs, purposes, and capacities of the youth it serves. The mean of scores of 2.6 was less than one fourth of the possible score, indicating that the physical education program was not very well designed to

TABLE XXIX
SCORES ATTAINED BY SCHOOLS IN GROUP C ON THE TEN
DIVISIONS OF THE EVALUATION SCALE

School	Principle										Total Score	Mean of Scores
	1	2	3	4	5	6	7	8	9	10		
C-1	4	3	0	0	5	0	3	4	6	4	41	4.1
C-2	3	2	1	0	2	1	1	3	2	7	20	2.0
C-3	0	1	0	1	0	1	0	0	1	0	12	1.2
C-4	0	0	5	0	2	0	2	0	5	0	13	1.3
C-5	5	0	5	0	2	0	2	0	6	0	37	3.7
C-6	0	2	4	3	2	4	3	2	5	2	22	2.2
C-7	3	1	3	4	2	3	3	2	5	1	27	2.7
C-8	4	3	5	3	4	3	3	2	5	1	37	3.7
C-9	6	3	5	3	4	3	3	2	6	0	39	3.9
C-10	4	2	5	3	2	4	3	2	4	2	31	3.1
C-11	6	3	4	3	2	4	3	2	6	0	38	3.8
C-12	5	2	4	3	2	4	3	2	6	0	33	3.3
C-13	7	2	5	3	1	5	2	3	6	1	51	5.1
C-14	4	3	5	3	2	4	3	2	5	0	33	3.3
C-15	5	4	5	3	4	2	6	3	5	0	42	4.2
Mean of Scores for Principles	3.7	2.3	4.8	2.9	2.3	2.6	4.7	2.0	5.5	.9	31.7	

combat sedentary living or promote physical fitness, as shown by the responses of the schools in this group. In the rating of Principle Seven, the Group C schools had a mean of scores of 4.7 which was indicative of some effort to develop physical education possibilities by encouraging wise use of leisure time and by supplementing community facilities for joint recreational purposes. Physical education program continuity in order to provide the best possible teaching-learning situation was very low in the schools as was shown by the mean of scores of 2.0 for Principle Eight. The mean of scores for schools in Group C of 5.5 indicated that the physical education program and staff received administrative support according to Principle Nine. Although there was a rather high indication of support by the administration, the schools in this group had very low mean of scores for Principle Ten of .9, which indicated that basic instruction was not provided for all students. The mean of the total scores for Group C was 31.7, which indicated that the schools in this group were operating their physical education activity programs at 39.4 per cent of their maximum potential.

Evaluation of Activity Program in All Schools

As was indicated in Table XXX, the mean of scores attained by the three groups, A, B, and C, were shown for the ten principles of the evaluating instrument. The composite

of the mean of the scores for all of the schools in their respective groups in answer to the questions supporting each of the ten principles, was shown in Table XXX. Of the three groups, Group C scores were slightly higher on Principle One; Group C schools had a mean of scores of 3.7; Group B schools had a mean of scores of 3.3, as did Group A. This would indicate that the larger schools offered a somewhat wider variety of activities, with opportunities for acquiring a number of motor skills, than did the two classifications of smaller schools. In considering the physical education program an integral part of the total educational effort of the schools, all three of the groups had a low mean of scores, with the largest schools scoring lowest with 2.3; Groups A and B had a mean of scores of 2.9. The group scores for Principle Three were not very high, which indicated that the physical education program did not serve all pupils, giving adequate opportunity to those who need physical education most. Group C had a mean of scores of 4.8, Group A had a mean of scores of 4.6, while Group B had 4.5. The large schools had a mean of scores of 2.9, the medium-size schools had a mean of scores of 3.2, and the small schools had a mean of scores of 3.1 in support of Principle Four which deals with whether the physical education program is conceived and conducted with an awareness of the unitary nature of man. These mean of scores were so close together that there was not much variance in the combined efforts to

TABLE XXX

MEAN SCORES ATTAINED BY GROUPS A, B, AND C ON THE TEN
DIVISIONS OF THE EVALUATION SCALE

Grp.	Principle										Mean of Scores
	1	2	3	4	5	6	7	8	9	10	
A	3.3	2.9	4.6	3.1	2.9	3.2	4.1	1.1	4.7	.6	3.1
B	3.3	2.9	4.5	3.2	2.3	2.8	3.4	1.0	4.9	1.0	3.2
C	3.7	2.3	4.8	2.9	2.2	2.6	4.7	2.0	5.5	.9	3.2

meet this principle; the concerted effort is not very high. A course of study that is educationally sound, based upon the interests, needs, purposes, and capacities of the youth it serves, did not exist to a very high degree in any of the schools in these three groups, as was indicated by the mean of scores of Group A, 2.9; Group B, 2.3; or Group C, 2.2. From the mean of scores, it was apparent that fewer schools in Group C had courses of study than either of the other two groups. Group A, the smaller schools, had a mean of scores of 3.2 on Principle Six which involved a program designed to combat sedentary living and promote physical fitness; the other two groups had lower scores for this principle, Group B had a mean of scores of 2.8, while Group C had a mean of scores of 2.6. Schools in Group B had the lowest mean of scores for Principle Seven, 3.4; the schools in Group A had a mean of scores of 4.1, while Group C had a mean of

scores for the same principle of 4.7. This would indicate that the effort to develop physical education possibilities by encouraging the wise use of leisure time and supplementing community facilities for joint recreational purposes, as stated in Principle Seven, showed some improvement over the other principles, but it still was less than half of the possible attainment according to the evaluation instrument. Program continuity, which provides the best possible teaching-learning situation was not accomplished very well by any of the schools in these groups. Group A had a mean of scores of 1.1 on Principle Eight; Group B had a mean of scores of 1.0; Group C had a mean of scores of 2.0. Administrative support appeared to be stronger in the schools of Group C, those having a male population of from 600-1,400, with a mean of scores of 5.5; Group B had a mean of scores of 4.9; while Group A had a mean of scores of 4.7. Thus, as indicated, the administrative support was stronger in the larger schools, and decreased in amount as the size of the school became smaller. Although there were indications that the larger schools, Group C, had more administrative support than the smaller schools, they were next lowest in mean of scores for Principle Ten which involved a physical education program that provided basic instruction for all students. Group C had a mean of scores for this principle of .9; Group A had a mean of scores of .6; while Group B scored just above the larger group with 1.0.

Summary

The preceding tables show the scores attained in each school on the ten divisions of the evaluation scale. The schools were classified in the previously used grouping based upon the number of boys enrolled. All Group A schools were assigned a number for identification since the names of the schools have not been used, for instance, Group A schools are numbered A-1, A-2, A-3, and so on. This same system was used for all of the schools in each of the remaining groups. The scores and mean of scores were shown in these tables.

Each principle was compared by the degree to which the schools of a particular group met a certain principle. The mean of the total scores for Group A was 30.4 which indicated that the schools in this category were operating their physical education programs at 38 per cent of the maximum potential. The mean of the total scores for Group B was 29.7. This would indicate that the schools in that group were operating their physical education activity programs at 37.1 per cent of the maximum potential. The mean of the total scores for Group C was 31.7, which indicated that the schools in this group were operating their physical education activity programs at 39.4 per cent of their maximum potential. Although the difference was slight, the larger schools appeared to have physical education activity programs operating at a higher level of maximum potential than did the schools in

either Group A or Group B. The medium-size schools were operating at a lower level of efficiency than were the small schools, although this difference was only .9 per cent.

Comparison of Scope of Activities and Evaluation of Programs

In an effort to discover if there was any relationship between the number of activities in the physical education program and the degree to which these schools met the principles, two through ten, a set of tables, based upon the ratings established earlier in this chapter for measuring the degree to which a school met Principle One, were constructed. Those schools scoring 9-27 on Principle One were put into a group and labeled with a Roman I with "a" representing the first school, "b" the second school, and so on for all those schools scoring lowest on Principle One. One school had a score of 12 on Principle One and was put into the next category and identified with Roman numeral II. The remainder of the schools were classified according to their score on Principle One, arranged in ascending order according to score. This made a total of eight groups identified by Roman numerals I through VIII, with scores ranging from 9-44.

The eight tables following (XXXI-XXXIX) classify all fifty-three of the schools according to the above mentioned system for purposes of showing the scores attained on Principles Two through Ten for each of the eight groups. Group I is low and Group VIII is high.

Comparison of Group I Schools

In Table XXXI is shown the scores attained on Principles Two through Ten of the evaluative scale by schools in Group I according to the activity offerings in the physical education programs for boys. The scores attained, as shown in Table XXXI, are those on all but the first principle of the evaluative instrument by those schools in Group I. The schools in this group had a low score on Principle One and also indicated that their physical education programs were not considered as an integral part of the total educational effort of the school as expressed in Principle Two, since their mean of scores for this principle was .9. Group I schools had a mean of scores for Principle Three of 4.7 which indicated an almost 50 per cent effort to serve all pupils, giving an adequate opportunity to those who needed physical education most. That a physical education program, conceived and conducted with an awareness of the unitary nature of man, as stated in Principle Four, was not being met to a very high degree by the schools in Group I was revealed by the mean of scores of 2.1. This group of schools had a mean of scores for Principle Five of .8. This seemed to indicate that the efforts to provide a course of study which was educationally sound, based upon the interests, needs, purposes and capacities of the youth it served were negligible. Group I schools, in their attempts to design a physical education program to combat sedentary living and to promote

TABLE XXXI

SCORES ATTAINED ON PRINCIPLES TWO THROUGH TEN OF THE
EVALUATIVE SCALE BY SCHOOLS IN GROUP I ACCORDING
TO ACTIVITY OFFERINGS IN THE PHYSICAL
EDUCATION PROGRAM FOR BOYS

Sch.	Principle									Tot. Scr.	Mean of Scr.
	2	3	4	5	6	7	8	9	10		
I a	1	4	4	0	3	3	1	5	1	22	2.4
I b	0	5	1	0	0	2	0	5	0	13	1.4
I c	1	5	3	0	0	2	0	6	0	17	1.8
I d	1	5	0	0	1	0	0	5	0	12	1.3
I e	0	5	2	0	2	5	0	4	0	18	2.0
I f	1	5	1	0	1	0	0	6	1	15	1.7
I g	0	2	2	0	0	2	0	3	0	9	1.0
I h	1	5	3	2	1	4	0	6	0	20	2.2
I i	3	6	3	5	2	1	2	5	0	27	3.0
Mn of Scr. for Prin.	.9	4.7	2.1	.8	1.1	2.1	.3	5.0	.2		

physical fitness, had a mean of scores on Principle Six of 1.1, which did not indicate a very high degree of accomplishment. Principle Seven, a physical education program that develops possibilities by encouraging wise use of leisure time and supplementing community facilities for joint recreational purposes, is met to a low degree by the nine

schools in this group as was shown by the mean of scores of 2.1. The continuity of the physical education program which aids in the establishment of the best possible teaching-learning situation, as stated in Principle Eight, was not done to a very high degree as is indicated by the mean of scores of .3. As has been shown in previous tables (XXVII-XXX), Principle Nine was considered by the teachers to be met to a larger degree than any of the other principles; these nine schools had a mean of scores for Principle Nine of 5.0. The schools of this group made very little effort to provide a physical education program of basic instruction for all students, as was shown by the mean of scores of .2.

Comparison of Group II School

In Table XXXII is shown the scores attained by one school, since there was only one school rated in Group II, on all but the first principle of the evaluative scale. This particular school in Group II had a mean of scores for Principle Two of 1.0, which points out that this institution did not consider the physical education program as an integral part of the total educational effort of the school to a very high degree. The school in this grouping had a mean of scores for Principle Three of 2.0, which did not indicate a high degree of effort to serve all pupils, giving an adequate opportunity to those who needed physical education most. Principles Five, Eight, and Ten were zero scores for this

TABLE XXXII

SCORES ATTAINED ON PRINCIPLES TWO THROUGH TEN OF THE
EVALUATIVE SCALE BY SCHOOLS IN GROUP II ACCORDING
TO ACTIVITY OFFERINGS IN THE PHYSICAL
EDUCATION PROGRAM FOR BOYS

School	Principle									Total Score	Mean of Scores
	2	3	4	5	6	7	8	9	10		
II a	1	2	1	0	1	2	0	5	0	12	1.3
Mean of Scores for Prin- ciples	1.	2.	1.	0	1.	2.	0	5.	0		

particular school. A physical education program, conceived and conducted with an awareness of the unitary nature of man which is Principle Four, was not being met to a high degree by the one school in this group, as was revealed by the mean of scores of 1.0. The Group II school, in its attempts to design a physical education program to combat sedentary living and to promote physical fitness, had a mean of scores on Principle Six of 1.0, which did not indicate a very high degree of accomplishment. Principle Seven, a physical education program that develops possibilities by encouraging the wise use of leisure time and supplementing community facilities for joint recreational purposes, was met to a low degree by this one school as was shown by the mean of scores of 2.0. Principle Nine was considered by the teachers to be met to a

larger degree than any of the other principles; these schools had a mean of scores for Principle Nine of 5.0.

Comparison of Group III Schools

The scores attained on Principles Two through Ten of the evaluative scale by schools in Group III, according to the activity offerings in physical education programs for boys, is shown in Table XXXIII. These five schools in Table XXXIII had a low score on Principle One and also indicated that their physical education programs were not considered an integral part of the total educational effort of the school as expressed in Principle Two, since the mean of scores for this principle was 1.8. Group III schools had a mean of scores for Principle Three of 3.6 which indicated an effort of low degree to serve all pupils, giving adequate opportunity to those who needed physical education most. A physical education program, conceived and conducted with an awareness of the unitary nature of man by the schools in this group indicated that Principle Four was not being met to a high degree as revealed by the mean of scores of 2.4. This group of schools had a mean of scores for Principle Five of 2.8, showing that the effort to provide a course of study which was educationally sound, based upon the interests, needs, purposes, and capacities of the youth it served, were negligible. Group III schools, in their attempts to design a physical education program to combat sedentary living and

TABLE XXXIII

SCORES ATTAINED ON PRINCIPLES TWO THROUGH TEN OF THE EVALUATIVE SCALE BY
SCHOOLS IN GROUP III ACCORDING TO ACTIVITY OFFERINGS IN THE
PHYSICAL EDUCATION PROGRAM FOR BOYS

School	Principle										Total Score	Mean of Scores
	2	3	4	5	6	7	8	9	10			
III a	1	1	2	3	1	6	0	2	0	16	1.8	
III b	1	3	2	2	1	3	0	6	0	18	2.0	
III c	4	6	4	4	3	2	0	6	2	31	3.4	
III d	0	5	2	2	2	3	1	6	0	21	2.3	
III e	3	3	2	3	2	1	2	3	0	19	2.1	
Mean of Scores for Principles	1.8	3.6	2.4	2.8	1.8	3.0	.6	4.6	.4			

to promote physical fitness, had a mean of scores on Principle Six of 1.8, which did not indicate a very high degree of accomplishment. Principle Seven, a physical education program that develops possibilities by encouraging the wise use of leisure time and supplements community facilities for joint recreational purposes, was met

to a low degree by the five schools in this group as was shown by the mean of scores of 3.0. The continuity of the physical education program which aids in the establishment of the best possible teaching-learning situation, as stated in Principle Eight, was not indicative of a very high degree of performance, based upon the low mean of scores of .6. The physical education staff and program received a fairly high degree of administrative support, as expressed in Principle Nine; scores of this principle have been consistently higher than for any of the other principles. Group III schools had a mean of scores of 4.6. This group made very little effort to provide a physical education program of basic instruction for all students, as was shown by the mean of scores of .4.

In Table XXXIV is presented the scores attained on Principles Two through Ten of the evaluative scale by schools in Group IV, according to the activity offerings in the physical education program for boys. These seven schools in Table XXXIV had a low score on Principle One and also indicated that their physical education programs were not considered an integral part of the total educational effort of the school as expressed in Principle Two, since their mean of scores for this principle was 1.3. These Group IV schools had a mean of scores for Principle Three of 4.6 which indicated an effort of less than half to serve all pupils, giving adequate opportunity to those who needed physical education most. A physical education program, conceived and conducted

TABLE XXIV

SCORES ATTAINED ON PRINCIPLES TWO THROUGH TEN OF THE EVALUATIVE SCALE BY SCHOOLS IN GROUP IV ACCORDING TO ACTIVITY OFFERINGS IN THE PHYSICAL EDUCATION PROGRAM FOR BOYS

School	Principle										Total Score	Mean of Scores
	2	3	4	5	6	7	8	9	10			
IV a	1	3	3	2	3	3	2	5	2	24	2.7	
IV b	2	5	1	2	0	0	1	6	0	17	1.9	
IV c	1	4	2	3	4	6	1	4	0	25	2.8	
IV d	1	5	2	4	4	4	2	6	0	28	3.1	
IV e	2	3	4	4	3	4	2	5	0	27	3.0	
IV f	2	6	3	2	3	4	1	6	0	27	3.0	
IV g	0	6	3	1	2	3	1	6	0	22	2.4	
Mean of Scores for Principles	1.3	4.6	2.6	2.6	2.6	2.7	3.4	1.4	5.4	.03		

with an awareness of the unitary nature of man by the schools in Group IV indicated that Principle Four was not being met to a high degree as was shown by the mean of

scores of 2.6. This group of schools had a mean of scores for Principle Five of 2.6, indicating that the efforts to provide a course of study which is educationally sound, based upon the interests, needs, purposes, and capacities of the youth it served were negligible. The schools of Group IV, in their attempts to design a physical education program to combat sedentary living and to promote physical fitness, had a mean of scores on Principle Six of 2.7, which did not indicate a very high degree of accomplishment. Principle Seven, a physical education program that develops possibilities by encouraging the wise use of leisure time and supplements community facilities for joint recreational purposes, was met to a low degree by the seven schools in this group as was shown by the mean of scores of 3.4. The continuity of the physical education program, which aids in the establishment of the best possible learning-teaching situation, as stated in Principle Eight, was not done to a very high degree, of which the mean of scores of 1.4 was indicative. The physical education staff and program received a high degree of administrative support, as revealed in Principle Nine; the scores on this principle have been consistently higher than those for any other principle. Group IV schools had a mean of scores of 5.4. This group made very little effort to provide a physical education program of basic instruction for all students, as was shown by the mean of scores of .3.

Comparison of Group V Schools

The scores attained on Principles Two through Ten of the evaluative scale by schools in Group V according to the activity offerings in the physical education program for boys, are shown in Table XXIV.

The nine schools in Table XXIV had a low score on Principle One and also indicated that their physical education programs were not considered as an integral part of the total educational effort of the school as expressed in Principle Two, since their mean of scores for this principle was 3.0. The schools in Group V had a mean of scores for Principle Three of 4.8 which was not indicative of much effort to serve all pupils, giving adequate opportunity to those who needed physical education most. A physical education program, conceived and conducted with an awareness of the unitary nature of man by the schools in Group V indicated that Principle Four was not being met to a high degree as revealed by the mean of scores of 3.2. The schools in this group had a mean of scores for Principle Five of 3.1, indicating that the efforts to provide a course of study which is educationally sound, based upon the interests, needs, purposes, and capacities of the youth it serves were negligible. The schools in Group V, in their attempts to design a physical education program to combat sedentary living and to promote physical fitness, had a mean of scores of Principle Six of 2.2 which did not indicate a very high degree of accomplishment.

TABLE XXV

SCORES ATTAINED ON PRINCIPLES TWO THROUGH TEN OF THE EVALUATIVE SCALE BY
SCHOOLS IN GROUP V ACCORDING TO ACTIVITY OFFERINGS IN THE
PHYSICAL EDUCATION PROGRAM FOR BOYS

School	Principle										Total Score	Mean of Scores
	2	3	4	5	6	7	8	9	10			
V a	3	6	5	4	3	8	1	7	0	37	4.1	
V b	3	5	3	2	2	6	2	5	1	29	3.2	
V c	2	5	2	2	2	8	2	4	0	27	3.0	
V d	3	5	3	4	2	8	2	5	1	33	3.6	
V e	4	2	3	5	3	7	2	5	1	32	3.5	
V f	2	4	4	2	2	5	1	6	0	26	2.9	
V g	4	6	3	3	3	0	2	5	3	29	3.2	
V h	5	6	3	3	3	1	1	5	1	28	3.1	
V i	1	4	3	1	0	4	1	5	0	19	2.1	
Mean of Scores for Principles	3.0	4.0	3.2	3.1	2.2	5.2	1.5	5.2	.8			

Principle Seven, a physical education program that develops possibilities by encouraging the wise use of leisure time and supplements community facilities for joint recreational purposes, was met to a somewhat higher degree by the nine schools in this group as was shown by the mean of scores of 5.2. The continuity of the physical education program, which aids in the establishment of the best possible teaching-learning situation, as stated in Principle Eight, was not done to a very high degree as was indicated by the mean of scores of 1.5. The physical education staff and program received a high degree of administrative support, as shown in Principle Nine; this followed the trend of a consistently higher score on this principle by all of the schools. Group V schools had a mean of scores of 5.2. The schools included in this category made very little effort to provide a physical education program of basic instruction for all students, as was shown by the mean of scores of .8.

Table XXXVI presents the scores attained on Principles Two through Ten of the evaluative scale by schools in Group VI according to the activity offerings in the physical education program for boys. These fourteen schools in Table XXXVI had a rather low score on Principle One and also indicated that their physical education programs were not considered to a high degree to be an integral part of the total educational effort of the school, as expressed in Principle Two. Their mean of scores for this principle was 4.2. The

TABLE XXVI

SCORES ATTAINED ON PRINCIPLES TWO THROUGH TEN OF THE EVALUATIVE SCALE BY SCHOOLS IN GROUP VI ACCORDING TO ACTIVITY OFFERINGS IN THE PHYSICAL EDUCATION PROGRAM FOR BOYS

School	Principle										Total Score	Mean of Scores
	2	3	4	5	6	7	8	9	10			
VI a	4	4	5	4	6	5	3	6	0	37	4.1	
VI b	2	5	3	1	2	5	3	6	1	28	3.1	
VI c	2	6	3	2	4	7	2	6	0	32	3.5	
VI d	2	5	4	0	4	2	1	6	0	24	2.7	
VI e	6	5	5	5	3	3	1	5	2	35	3.9	
VI f	5	5	6	3	6	4	1	5	0	36	4.0	
VI g	5	5	4	4	3	5	2	4	0	33	3.7	
VI h	4	5	3	3	1	4	2	7	0	29	3.2	
VI i	5	6	1	1	4	4	2	5	1	29	3.2	
VI j	6	5	5	6	3	4	1	2	0	32	3.5	
VI k	4	3	3	2	2	3	0	3	1	20	2.2	
VI l	5	6	4	2	5	4	0	5	2	33	3.7	
VI m	4	5	4	2	4	4	1	5	2	31	3.4	
VI n	5	6	3	4	5	8	2	5	0	38	4.2	
Mean of Scores for Principles	4.2	4.8	3.8	2.8	3.7	4.4	1.5	5.0	.6			

schools of Group VI had a mean of scores for Principle Three of 4.8, which indicated an almost 50 per cent effort to serve all pupils, giving adequate opportunity to those who needed physical education most. A physical education program, conceived and conducted with an awareness of the unitary nature of man by the schools in this group indicated that Principle Four was not being met to a very high degree as was revealed by the mean of scores of 3.8. Schools in this group had a mean of scores for Principle Five of 2.8, showing that the efforts to provide a course of study which is educationally sound, based upon the interests, needs, purposes, and capacities of the youth it served were negligible. In their attempts to design a physical education program designed to combat sedentary living and to promote physical fitness, Group VI schools had a mean of scores on Principle Six of 2.8, which was not indicative of a very high degree of accomplishment. Principle Seven, a program that develops physical education possibilities for encouraging the wise use of leisure time and supplements community facilities for joint recreational purposes, measure just above half of the possible score, as was shown by the mean of scores of 4.4. The continuity of the physical education program, which aids in the establishment of the best possible teaching-learning situation, as stated in Principle Eight, was not done to a very high degree as was indicated by the mean of scores of 1.5. The physical education staff and program received a high

degree of administrative support, as shown in Principle Nine; this followed the trend of scores by other schools. These schools had a mean of scores of 5.0. This category of schools made very little effort to provide a physical education program of basic instruction for all students as was shown by the mean of scores of .6. This was also a trend observable in the scores of all the schools in this study.

Comparison of Group VII Schools

Table XXXVII presents the scores attained on Principles Two through Ten of the evaluative scale by schools in Group VII according to the activity offerings in the physical education program for boys. The three schools in Table XXXVII had a rather low score on Principle One. This indicated that their physical education programs were not considered to a very high degree to be an integral part of the total educational effort of the schools as expressed in Principle Two. Their mean of scores for this principle was 4.0. The Group VII schools had a mean of scores for Principle Three of 4.1 which indicated that not quite 50 per cent effort to serve all pupils, giving adequate opportunity to those who needed physical education most, was expended. A physical education program, conceived and conducted with an awareness of the unitary nature of man by the schools in this group indicated that Principle Four was not being met to a very high degree as would be borne out by the mean of scores of 3.3. The

TABLE XXVII

SCORES ATTAINED ON PRINCIPLES TWO THROUGH TEN OF THE EVALUATIVE SCALE BY SCHOOLS IN GROUP VII ACCORDING TO ACTIVITY OFFERINGS IN THE PHYSICAL EDUCATION PROGRAM FOR BOYS

School	Principle										Total Score	Mean of Scores
	2	3	4	5	6	7	8	9	10			
VII a	3	4	3	2	4	5	3	6	2	32	3.5	
VII b	3	5	3	4	3	6	2	6	1	29	3.2	
VII c	6	4	4	3	6	6	1	4	0	34	3.8	
Mean of Scores for Principles	4.0	4.1	3.3	3.0	4.1	5.6	2.0	5.3	1.0			

schools in this group had a mean of scores for Principle Five of 3.0, which indicated that the efforts to provide a course of study which is educationally sound, based upon the interests, needs, purposes, and capacities of the youth it serves was negligible. The Group VII schools, in their attempts to design a physical education program to combat sedentary living and to promote physical fitness, had a mean of scores for Principle Six of 4.1 which indicated a somewhat higher degree devoted to the effort

to meet this principle than that exhibited by schools in previous classifications. Principle Seven, which calls for a program that develops physical education possibilities for encouraging the wise use of leisure time and supplements community facilities for joint recreational purposes, was being met to a higher degree than average by these three schools as was shown by the mean of scores of 5.6. Continuity of the physical education program, which aids in the establishment of the best possible teaching-learning situation, as stated in Principle Eight, was not accomplished to a very high degree in these schools as was indicated in their mean of scores of 2.0. The physical education staff and program received a high degree of administrative support, as shown in Principle Nine. The mean of scores by these schools of 5.3, follows the trend throughout the study of the schools attaining a higher score consistently on this principle. Provision of a physical education program of basic instruction for all students was almost non-existent in the Group VII schools for Principle Ten; this was indicated by the mean of scores of 1.0.

Comparison of Group VIII Schools

Table XXVIII indicates the scores attained on Principles Two through Ten of the evaluative scale by the schools in Group VIII according to the activity offerings in the physical education program for boys. These five schools in

TABLE XXVIII

SCORES ATTAINED ON PRINCIPLES TWO THROUGH TEN OF THE EVALUATIVE SCALE BY SCHOOLS IN GROUP VIII ACCORDING TO ACTIVITY OFFERINGS IN THE PHYSICAL EDUCATION PROGRAM FOR BOYS

School	Principle										Total Score	Mean of Scores
	2	3	4	5	6	7	8	9	10			
VIII a	5	5	5	5	4	4	6	5	5	44	4.9	
VIII b	4	5	6	3	6	6	3	5	2	40	4.4	
VIII c	3	3	6	3	7	5	3	4	3	37	4.1	
VIII d	4	6	1	6	1	6	1	5	0	30	3.3	
VIII e	4	4	5	3	4	4	0	1	1	26	2.9	
Mean of Scores for Principles	4.0	4.6	4.6	4.0	4.4	5.0	2.6	4.0	2.2			

Table XXVIII had a comparatively better score on Principle One than did the other fifty schools. This was indicated by their mean of scores of 4.0, which tends to show that their physical education programs were considered to be an integral part

of the total educational effort of the school as expressed in Principle Two to a higher degree than the other institutions of this study.

The Group VIII schools had a mean of scores for Principle Three of 4.6, which indicated that an almost 50 per cent effort to serve all pupils, giving adequate opportunity to those who needed physical education most, was put forth by these schools. A physical education program, conceived and conducted with an awareness of the unitary nature of man by the schools in this group indicated that Principle Four was being met just above the mid-point, as revealed by the mean of scores of 4.6. The schools in this grouping had a mean of scores for Principle Five of 4.0, indicating that the efforts to provide a course of study which is educationally sound, based upon the interests, needs, purposes, and capacities of the youth it served, was just half of what it could have been. The Group VIII schools, in their attempts to design a physical education program to combat sedentary living and to promote physical fitness, had a mean of scores for Principle Six of 4.4, which indicated somewhat more effort devoted to this principle than by those schools scoring lower on Principle One. Principle Seven, a physical education program that develops possibilities for encouraging the wise use of leisure time and supplements community facilities for joint recreational purposes, was being met to a rather high

degree by these five schools, as was shown by the mean of scores of 5.0. The continuity of the physical education program which aids in the establishment of the best possible teaching-learning situation, as stated in Principle Eight, was not done to a high degree as was shown by the mean of scores of 2.6. The physical education staff and program received half of the possible amount of support as expressed in Principle Nine, since their mean of scores was 4.0. More effort was expended by this group to provide a physical education program with basic instruction for all students than by any of the other seven groups, as evidenced by the mean of scores of 2.2, for Principle Ten of the evaluative instrument.

Composite Comparison of Groups I Through VIII

In Table XXXIX, a composite of the eight groups, with the mean scores attained on Principles Two through Ten of the evaluative scale according to activity offerings in the physical education program for boys, is presented.

In Table XXXIX is shown the mean of scores attained by Groups I through VIII on Principles Two through Ten according to the activities included in the boys' physical education program. From this table a tendency is indicated that those schools providing a wide range of activities also meet the principles of physical education to a higher degree than do those schools that only include the "usual" activities of

TABLE XXIX

MEAN SCORES ATTAINED BY GROUPS I THROUGH VIII ON PRINCIPLES TWO THROUGH TEN OF THE EVALUATIVE SCALE ACCORDING TO ACTIVITY OFFERINGS IN THE PHYSICAL EDUCATION PROGRAM FOR BOYS

Group	No. of Schools	Principle									Mean of Scores
		2	3	4	5	6	7	8	9	10	
I	9	.9	4.7	2.1	.8	1.1	2.1	.3	5.0	.2	1.9
II	1	1.0	2.0	1.0	0	1.0	2.0	0	5.0	0	1.3
III	5	1.8	3.6	2.4	2.8	1.8	3.0	.1	4.6	.4	2.3
IV	7	1.3	4.6	2.6	2.6	2.7	3.4	1.4	5.4	.3	2.7
V	9	3.0	4.8	3.2	3.1	2.2	5.2	1.5	5.2	.8	3.2
VI	14	4.2	4.8	3.8	2.8	3.7	4.4	1.5	5.0	.6	3.4
VII	3	4.0	4.1	3.3	3.0	4.1	5.6	2.0	5.3	1.0	3.6
VIII	5	4.0	4.6	4.6	4.0	4.4	5.0	2.6	4.0	2.2	3.9
Mean of Scores for Principles	53	2.6	4.2	2.9	2.4	2.6	3.8	1.2	4.9	.7	

softball, basketball, touch football, and track and field. This is shown by the comparison of the mean of scores for all eight groups; Group I had a mean score of 1.9; Group II had 1.3 (only one school in this group); Group III had 2.4; Group IV had 2.7; Group V had 3.2; Group VI had 3.4; Group VII had 3.6; and Group VIII had the highest with 3.9.

Summary

After visiting the fifty-three junior high schools included in this study, the schools were divided into three groups according to size. The first group, A, included those institutions with a male enrollment of from 100-349; Group B was made up of the schools with from 350-599 boys in attendance; and Group C involved those schools with an enrollment of from 600-1,400.

A typical interview was given which was conducted in a school from Group A. In order to score Principle One, a system was devised based upon the number of activities offered, and the amount of teaching done in each of the three grades; this was a nine point scale, ranging from zero to eight.

From efforts to tabulate, it was found that if the numbers used to indicate the degree to which a principle was met were changed from zero to five to zero to eight, the degrees could be more readily scored by basing it upon the "YES" answers. Thus, five "YES" answers would be circled on the possible "YES-NO" responses and counted for a positive in which to score the scale.

The name, location, and male enrollment of the schools with the population of the cities in which the schools were located is shown in table form for the three Groups A, B, and C. Several tables were presented showing the number and percentage of schools in which the activity program was judged to be consistent with the items in Principle Two. This was done for Principles Two through Ten and the following statements summarize these tables. There were few indications that the physical education program was considered an integral part of the total educational effort of the school. The percentages were rather high on several of the eight questions supporting the third principle, indicating that in some measure the physical education program does serve some of the pupils. There was little indication that the physical education program was conducted with an awareness of the unitary nature of man. It appears that few schools had courses of study in physical education that were educationally sound.

While the responses revealed that the teachers encouraged wise use of leisure time through physical education, the promotion of physical fitness, in order to combat sedentary living, was not very well accomplished by the schools included in this study. The best teaching-learning situation was not provided by the institutions visited for the purposes of this study. There was evidence that the physical education staff and program received adequate administrative support. There

were indications that the school facilities were used for leisure time pursuits by the members of the various communities. Generally, there was a lack of program continuity in the physical education programs of the schools visited.

The completed evaluation instruments were divided into four classifications based upon the scores made by the various schools. These classifications were established for the purpose of dividing the schools into groups: first, those schools having poor programs, indicated by the score grouping of 0-20; fair programs included the scores of 21-40; those programs were considered to be good if the scores fell between 41-60; and excellent programs were in the range of 61-80. From these groupings there appears to be an indication that the smaller schools tend to have better over-all physical education programs than the larger ones, while those in Group B, appear to be weaker than either of the others. It was found that all three groups tend to cluster in the 21-40, or Fair, category.

The activity phase of the boys' physical education programs for the three groups, A, B, and C, based upon the number of boys enrolled was shown. A list of the activities was included and the grades in which actual teaching was done was shown; the semester in which the activities were offered were included and whether or not there were adequate areas marked for playing was also given. There was some teaching done in the seventh grade, very little teaching was done in the eighth

grade, while teaching in the ninth grade was almost non-existent.

The teacher evaluation of the activities in the program was shown for the three groups, A, B, and C. The activities offered most of all of the schools and the ones which were rated high consistently by the teachers were: basketball, softball, touch football, and track and field.

The time allotment for each activity in blocks of time for both the first and second semesters was reviewed. None of the schools had baseball or an adapted physical education program. Apparently there were no planned programs for rainy days in these schools; during inclement weather dodge ball, volleyball, boxing, tumbling, calisthenics, and co-educational sports were substituted for the regular procedures. The amount of time allotted for basketball, softball, touch football, and track and field practically eliminated the possibility of offering a program consisting of a wide variety of activities by the schools visited.

Tables were presented to show the scores attained by each school on the ten divisions of the evaluation scale. The same classifications were used to group these schools, based upon the number of boys enrolled in a certain school. The schools in each of these three groups, A, B, and C, were assigned a number for convenience in the table; no school was identified by name. Each principle was compared by the

degree to which the schools of a particular group met a certain principle. The mean of the total scores for Group A was 30.4, which indicates that these schools were operating their physical education programs at 38 per cent of the maximum potential. Group B schools were operating their programs at 37.1 per cent of the maximum potential, while Group C schools were operating their physical education programs at 39.4 per cent of their maximum potential. Although the difference was slight, the larger schools appeared to be operating their programs at a higher level of maximum potential than were the schools in either Group A or Group B.

The final chapter of this study, Chapter V, will conclude with a presentation of a summary, conclusions, and recommendations.

CHAPTER V

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

The purpose of the present chapter is to give a brief summary of the investigation and to present the conclusions and recommendations developed from an analysis and interpretation of the data developed in the study.

Summary

The purpose of the study was to evaluate the activity phase of boys' physical education programs in selected junior high schools of Texas. One of the steps involved was to develop an evaluative instrument. In developing the instrument, extensive reading was done in the field of education and physical education and ten basic principles were formulated. Based on these ten principles, a testing instrument was devised. Trial experiments with the instrument resulted in two revisions and the development of a third and final instrument which proved to be feasible for evaluating physical education program activities. The completed evaluation instrument was then administered in fifty-three selected schools during April, May and June of 1956, to evaluate their physical education programs. The fifty-three participating schools were divided into three enrollment brackets: 100-349; 350-599; 600-1,400. Data from these different classifications were analyzed,

compared to each other, and then interpreted as a whole. Conclusions and recommendations were made on the basis of the developed data.

In the initial chapter the purposes of the study, the nature of the problem and its importance, limitations imposed, sources of data, related studies and organization of the study have been outlined.

Ten principles basic to an adequate measuring instrument for physical education programs at the junior high school level have been developed and documented in Chapter II.

The instrument used to evaluate boys' physical education programs at the junior high school level was described in Chapter III, and the major steps in its development were indicated.

In Chapter IV the application of the measuring instrument to the physical education programs of the selected junior high schools has been presented. Data have been tabulated, analyzed, and interpreted. The physical education programs in the schools of the different classifications have been shown individually, in comparison with the other group classifications, and collectively. Evaluations of the program have been made.

Conclusions

In the light of extensive reading in the field, the administration and scoring of the tests, and the analysis and

interpretation of the test data, the following conclusions have been reached:

1. Physical education in the participating schools was not being fully used as an educative experience. These schools were using the activity period for supervised play instead of instruction.

2. The teachers indicated that administrative support was adequate, but the study showed that 87 per cent of the programs were below the mid-point of the possible score of eighty. The inference is unmistakable that the teachers, in these instances, were unaware of the real nature of a physical education program and its needs.

3. The physical education programs in the participating schools were dominated by basketball, softball, touch football, and track and field. The time allotted to these sports eliminated the possibility of offering a program with a wide variety of activities providing more opportunities for the development of motor skills.

4. The teachers who participated in the study indicated that they believed in the principle that "physical education is education through the physical," but they did not put this belief into practice.

5. The equipment and facilities for physical education were sufficient in all of the schools of the study, but they were not fully utilized in the physical education programs.

6. The physical education programs, as measured, did not contain a sufficient variety of sports and games to meet the growth and developmental needs of the junior high school students; apparently, the teachers were not fully aware of these needs.

7. Although tests show that present-day growing youth between the ages of eight and fifteen are low in physical fitness and muscular development; practically no effort was made to correct this situation in the physical education programs.

8. Little or no provision was made for those individuals who were unable to participate in the regular activity programs of the school.

9. In a majority of the schools a medical examination was not required as a prerequisite to participation in the activity programs.

10. The majority of the schools had arrangements for joint recreational programs and encouraged the use of play as a leisure-time activity, but no effort was made to improve performance skills which could add much to future enjoyment.

11. No apparent neglect of the co-educational activities program was found.

12. Very few classes were limited to a specific number and in many cases different grades were grouped in one physical education class.

13. The schools in the study were operating their physical education activity programs at 38 per cent of their maximum potential.

Recommendations

Twelve suggestions are offered for the improvement of the physical education programs in the schools utilized in this study. These suggestions, likewise, will apply to physical education programs in any school. The suggestions are:

1. A health or medical examination should be required of all boys before they can participate in the activity program.
2. Principals, using the instrument developed in this study, should visit and observe the physical education classes in action.
3. The physical education teachers should construct courses of study for their own situation or request direction from the supervisor in conducting a system-wide revision.
4. The physical education teachers should use daily lesson plans.
5. Classes in physical education should be limited to not more than thirty-five students for each teacher.
6. A person should be employed as departmental head and teacher of physical education and be charged with the responsibility for conducting the activity phase of the program

as well as the intramural phase. The assistant coach or coaches whose sports are not in season would be used in a part-time capacity of physical education teacher; no coach should have more than two activity classes.

7. Less time should be devoted to basketball, softball, touch football, and track and field; the program should be enriched by adding many other games and sports.

8. Physical education classes should contain only half-grades in a class in the larger schools, but in the smaller schools an entire grade should be included in the class.

9. Planning for progression in each activity should be established so that a student can have three years of experience in junior high schools for each activity.

10. Fundamental skills should be stressed in the seventh grade and students tested in the eighth grade for skill acquisition. Re-teaching should be provided for those in low skills. Techniques in participating as game officials and experience should also be provided at this level. Various offensive and defensive formations in sports should be concentrated upon in the ninth grade, including intelligent appraisal of games in operation. A few individual sports should be introduced at this level.

11. Data from the physical fitness tests should be utilized in aiding each individual student to develop muscular skills so that he can perform the daily tasks of living

without undue fatigue or strain. In connection with this phase of the program, proper body mechanics should be taught.

12. The schools should make better use of co-educational activities within the program to provide desirable learning experiences for boys and girls in preparation for life.

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APPENDIX

EVALUATION OF BOYS' JUNIOR HIGH SCHOOL PHYSICAL EDUCATION ACTIVITY PROGRAMS

School

Number of Boys in School

Location

Name of Person Interviewed

Number of Physical Education Teachers

Number Coaching

Date

The following ten items are concerned with the philosophy, principles, and objectives upon which the physical education program is based.

The value of the numbered items represents the degree to which the school meets that condition, based upon the circled YES or NO questions. Only through carefully considered evaluation can programs be improved. The items in the scale attempt to find out to what degree a particular school meets the accepted principles of physical education.

In the number scale, zero is low and eight is high.

1. A program offering a wide variety of activities, with opportunities for acquiring a number of motor skills.

ACTIVITIES	In Program but not taught	Teaching done in			Semester		
		7	8	9	1	2	
SPORTS:							
Baseball							
Basketball							
Dodge Ball							
Soccer							
Softball							
Speedball							
Touch Football							
Track and Field							
Volleyball							
INDIVIDUAL:							
Badminton							
Boxing							
Horseshoes							
Paddle Tennis							
Tumbling							
Wrestling							
SELF-TESTING:							
Calisthenics							
DANCE:							
Social							
Square							
ADAPTED:							
CO-EDUCATIONAL:							
ACQUATICS:							
Swimming							
Diving							
W.S.I.							
MISCELLANEOUS:							

TO WHAT DEGREE:

2. Is the physical education program considered an integral part of the total educational effort of the school?

0 1 2 3 4 5 6 7 8

- a. Is the following concept believed and practiced by the physical education teachers of this school? Physical Education is education through the physical. YES NO
- b. Does a system of grading exist in physical education that conforms to the school policy for evaluating pupil performance? YES NO
- c. Does this program attempt to develop students through self-discipline and self-direction? YES NO
- d. Is there an established system for making up absences from the physical education class? YES NO
- e. Does the physical education teacher have an established policy for "temporary" or daily excuses? YES NO
- f. Are play situations employed to teach respect for properly appointed authority? YES NO
- g. Are performance tests given each student as a part of the regular teaching procedure? YES NO
- h. Is the activity program conducted in order to promote confidence in the learner? YES NO

TO WHAT DEGREE:

3. Does the program serve all pupils, giving adequate opportunity to those who need physical education most?

0 1 2 3 4 5 6 7 8

- a. Does this school require a medical examination before the student can participate in the activity class? YES NO

- | | | |
|---|-----|----|
| b. If a student has a medical excuse from physical education, is the physician required to list and sign those activities in which the student can participate? | YES | NO |
| c. Does this school have a sufficient variety of equipment and facilities to make possible a well-rounded program of activities? | YES | NO |
| d. Is full use made of the playground area for the activity classes? | YES | NO |
| e. Is there equitable scheduling of facilities for both girls' and boys' activity classes? | YES | NO |
| f. Are the dressing rooms adequate, providing sufficient space for students' clothing? | YES | NO |
| g. Does this school have shower rooms with sufficient shower heads to handle peak class loads? | YES | NO |
| h. Have all necessary safety precautions been supplied for the play area? | YES | NO |

TO WHAT DEGREE:

- | | | | | | | | | | |
|---|-------------------|----|--|--|--|--|--|--|--|
| 4. Is the program conceived and conducted with an awareness of the unitary nature of man? | 0 1 2 3 4 5 6 7 8 | | | | | | | | |
| a. Is an effort made to broaden the concept of physical education to include the various social experiences and not merely emphasize physical exertion? | YES | NO | | | | | | | |
| b. Are the social adjustments necessary in various games, by adhering to the rules, included as a part of the instruction? | YES | NO | | | | | | | |
| c. Is health information relative to the activity program a part of the instruction? | YES | NO | | | | | | | |
| d. Are the boys in the program given opportunities to understand some of the | | | | | | | | | |

- outcomes of competition, such as how to win graciously, to lose is not a disgrace, or not to take unfair advantage of an opponent? YES NO
- e. Are discussions conducted with students on "How to behave at a game?" YES NO
- f. Are students given consumer education in sporting goods? YES NO
- g. Is how to be a good spectator a phase of the teaching? YES NO
- h. Are strategies of offense and defense taught as a part of each activity? YES NO

TO WHAT DEGREE:

5. Does a course of study exist which is educationally sound, based upon the interests, needs, purposes, and capacities of the youth it serves?

0 1 2 3 4 5 6 7 8

- a. Is a detailed course of study available for each of the three grades? YES NO
- b. Does the course of study contain general and specific objectives to be reached at each grade level? YES NO
- c. Are the activities divided into units with a suggested procedure to follow for each unit? YES NO
- d. Are the activities included in the program suited to the needs and developmental characteristics of this age level? YES NO
- e. Are the activities taught in such a manner that will enable each student to progress at his own rate? YES NO
- f. Are students made aware of the objectives for which the teach is striving? YES NO

- g. Does the program aid boys in understanding their growth patterns, i.e. lack of height or excessive weight? YES NO
- h. Is the teaching conducted with an awareness of the teach-pupil relationship? YES NO

TO WHAT DEGREE:

6. Is the program designed to combat sedentary living and promote physical fitness?

0 1 2 3 4 5 6 7 8

- a. Are provisions made in the program for strengthening certain muscles as a part of maintaining good physical condition? i.e. strengthening abdominal muscles or the shoulder girth YES NO
- b. Are students taught that muscular activity is necessary for the proper functioning of the organs? YES NO
- c. Are boys taught that for development purposes, they need more exercise than can be included in one physical education period per day? YES NO
- d. Are proper body mechanics taught? YES NO
- e. Are students helped to understand the principle of exercise that the body reaches and maintains maximum development through continued exercise? YES NO
- f. Is good posture positively encouraged? YES NO
- g. Are boys taught the necessity of relaxation in relation to physical activity? YES NO
- h. Are boys taught the correct way to run? YES NO

TO WHAT DEGREE:

7. Does the program develop physical education possibilities by encouraging wise use of leisure time and supplementing community facilities for joint recreational purposes?

- | | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|--|---|---|---|---|---|---|-----|----|---|
| a. Are the students encouraged to participate in the activities taught during class in after school hours? | | | | | | | | | |
| | | | | | | | YES | NO | |
| b. Does the school provide facilities and equipment for community recreational use? | | | | | | | | | |
| | | | | | | | YES | NO | |
| c. Do community members use the facilities and equipment? | | | | | | | | | |
| | | | | | | | YES | NO | |
| d. Is there an organized summer recreation program conducted in the school? | | | | | | | | | |
| | | | | | | | YES | NO | |
| e. Is having fun through wholesome play encouraged as an outcome of physical education? | | | | | | | | | |
| | | | | | | | YES | NO | |
| f. Do the students have opportunities to practice the skills learned in the activity classes in an organized intramural program? | | | | | | | | | |
| | | | | | | | YES | NO | |
| g. Is the intramural program conducted after school? | | | | | | | | | |
| | | | | | | | YES | NO | |
| h. Are co-educational activities included in the program? | | | | | | | | | |
| | | | | | | | YES | NO | |

TO WHAT DEGREE:

8. Is program continuity provided in order to create the best possible teaching-learning situation?

- | | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|-----|----|---|
| a. Are the classes divided by half grades, i.e. all low sevens in the same period, etc.? | | | | | | | | | |
| | | | | | | | YES | NO | |
| b. Does the activity program have definite steps of progression for each of the three grades? | | | | | | | | | |
| | | | | | | | YES | NO | |
| c. Is a sufficient practice period provided for each boy in every learning situation? | | | | | | | | | |
| | | | | | | | YES | NO | |

- d. Are students in a particular class given individual attention and instruction dependent upon their level of ability? YES NO
- e. Are the relationships between various fundamental skills, with the necessary modification, included in the teaching? i.e. throwing the baseball; throwing (passing) in football; guarding in basketball; using the shuffle step-together-step related to the basic two-step as used in social dance? YES NO
- f. Is a level of proficiency established for each grade? YES NO
- g. Are standardized tests used to measure motor ability? YES NO
- h. Do the students have an opportunity to practice skills learned in physical education during class time? YES NO

TO WHAT DEGREE:

9. Does the physical education program and staff have adequate administrative support?

0 1 2 3 4 5 6 7 8

- a. Is the physical education budget adequate? YES NO
- b. Is there an equitable distribution of funds between the various phases of the total program? YES NO
- c. Is a physical education teacher designated as the responsible coordinator of the activity program? YES NO
- d. Are the classes in physical education limited to a specific number? YES NO
- e. Is the custodial service adequate in maintaining desirable healthful conditions in and around the physical education plant? YES NO

- | | | |
|---|-----|----|
| f. Is daily participation in the activity program required of all boys? | YES | NO |
| g. Are other activities substituted for physical education? | YES | NO |
| h. Does the school require a costume as a prerequisite for participation in the activity program? | YES | NO |

TO WHAT DEGREE:

10. Does the program provide instruction for all students?

0 1 2 3 4 5 6 7 8

- | | | |
|--|-----|----|
| a. Is instruction in the fundamental skills given for all activities in the program? | YES | NO |
| b. Are daily lesson plans used by the physical education teacher? | YES | NO |
| c. Does the teacher move from teaching station to teaching station, giving individual instruction? | YES | NO |
| d. Is provision made during the instructional phase to aid each boy in developing skill equal to his level of ability? | YES | NO |
| e. Are the students divided into small groups and supplied with sufficient equipment to practice the skill being taught? | YES | NO |
| f. Are the fundamental movements included as part of the teaching in the various activities? | YES | NO |
| g. Is proper foot position in walking and in other movements a part of the teaching? | YES | NO |
| h. Is an adapted physical education program provided for those who cannot participate in the regular activity program? | YES | NO |