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SUCCESSFUL TEACHING

IN PHYSICAL EDUCATION

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SUCCESSFUL TEACHING IN PHYSICAL EDUCATION

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Preface

TEACHING is a skill that can always be improved. Teaching is a profession that can always advance. These two statements are interdependent in action.

The twentieth century has been marked by periods in which better teaching and better physical education were not of major concern. The post-World War II period is not one of these. Parents are finding that well-taught physical education is a favorable avenue for the development of their offspring. School administrators are recognizing the vast potentialities of physical education in the hands of good teachers. State departments of education are taking steps further to improve teaching and, thus, physical education.

Competent teaching is the catalyst that enables physical education to produce desired results. Competency as a goal today represents higher standards for the teacher. Changed conditions and new demands mean changed emphases. Pressures are at work. The handwriting is on the wall.

The first major premise of the volume in hand therefore is that tomorrow's teachers will be better prepared to meet these challenges. New activities and programs cannot substitute for teaching. New facilities and equipment, badly needed as they may be, remain fine-sounding statements unless effective teaching transforms them into agencies of real accomplishment.

Successful teaching *in* physical education transcends the bounds of better methods of teaching physical education or those of teaching better physical education. The deeper meaning of this second premise accounts for many of the

out-of-the-ordinary topics discussed in the following pages. For a long time we have known that physical education is not taught to a *class*, but, rather, a particular *individual* is taught a certain activity and by means of that activity. Successful teaching pushes past this point. We teach in a particular community, according to reliable principles, and toward agreed-upon purposes.

Successful teaching *in* physical education also includes (1) emphasizing interesting and economical ways of personality development, (2) becoming better "salesmen" of physical education to parents and school personnel, (3) developing ways of teacher-improvement, (4) practicing active cooperation with one's administrator and fellow-teachers, (5) knowing the "whys" of teaching, and (6) understanding, influencing, and adjusting to the community.

Successful teaching *in* physical education includes, but exceeds, the common emphases of physical education methods, which are concerned with (1) emphasizing ways to develop skill, (2) "selling" physical education to pupils, (3) developing ways of pupil improvement, (4) teaching cooperation to pupils, (5) emphasizing teaching techniques, and (6) understanding and influencing the child and adjusting the program to him.

The authors are grateful to several hundred undergraduate students majoring in physical education at the Pennsylvania State College from 1931 to 1940 who cooperated in many experiments on which parts of the text are based. The authors' graduate classes at the Universities of Pittsburgh, Washington, Texas, and Southern California, and those at the Pennsylvania State College, made helpful contributions to the text. Many of the hundreds of principles of teaching in the following pages were developed by graduate classes of mature teachers at the University of Southern California and the University of Pittsburgh.

The authors also are appreciative of the permission to use

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* * *

The text material of the 1941 edition of this book has been changed in the 1948 edition in accordance with new facts, ideas and suggestions. These revisions are based not only on printed materials but also on advice from professional colleagues who, with the authors, used the text critically over a period of seven years.

This revision further clarifies the problems of human needs and the role of physical education in helping to satisfy these needs through better teaching. The study of value and of objectives has been approached in new ways. Skill-teaching techniques are adjusted to the modern concept of unified patterns growing out of a general framework. The test items found to be so helpful to students and professional educators have been supplemented. More recent bibliographical items have been added. The community as a force in teaching has been redefined. Highly technical terminology has been further simplified. New principles of teaching have been added. The study of motivation and of discipline has been attacked in new ways. The national inventory of health and physical fitness, beginning prior to and continuing past World War II, has furnished additional information for changes in the present volume.

Acknowledgment is given to scores of teachers who through correspondence have assisted in the improvement of the revised edition. Doctor Minnie L. Lynn, University of Pittsburgh, and Doctor Eleanor Metheny, University of Southern California, have contributed to the practicality, rearrangement, and reorganization of the present edition.

For these many and varied kinds of assistance the authors

are deeply appreciative; but the interpretation, presentation and emphasis of, together with any errors in, this present edition are the responsibility of the authors alone.

Elwood C. Davis
John D. Lawther

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SUCCESSFUL TEACHING

IN PHYSICAL EDUCATION

I.

Introduction

1.

What Perplexes the Beginning Teacher

"In such a strait the wisest are perplexed and the boldest staggered."—BURKE

Some problems. The beginning teacher is perplexed by many things. Securing suitable living quarters may be a problem. Salary is still a problem to many teachers. Maintaining one's energy and enthusiasm is a problem to most teachers. It takes boundless energy to maintain the constant alertness necessary for handling large groups of children, for guiding them into profitable behavior, for securing the observance of necessary routines, and for radiating each hour, day after day, enthusiasm for learning.

Adjustment to administrative and supervisory direction may be a problem. The teacher's social status in the community may disturb him. Community restrictions on out-of-school activities and on type of associates of both sexes may perplex the beginner.

Occupational insecurity may disturb the teacher, particularly if he is coaching competitive sports. Moreover, there are a thousand and one detailed duties required of the teacher. He may find it extremely difficult to take care of these details, plan his work, simultaneously keep up his professional study and growth, and have some time and energy for recreation.

Some rewards. But teaching has its satisfactions. Teaching children is almost universally accepted as being the most

important responsibility of a democracy. One tends to preserve his youthful enthusiasms by working with young people and stimulating their development. The admiration and respect of youth is a reward in itself. The vacations often offer opportunities for travel, recreation, self-improvement. The very nature of the teacher's work tends to bring associations with interesting and stimulating people of the community.

One other satisfaction is worth noting. The teacher has relative freedom as to techniques of teaching. He can exercise his own ingenuity and creativeness in fostering the learning process. He can express and develop his own personality in interpreting mankind's accumulation of knowledge and skills to the fresh minds of youth.

Who wants teachers? A look at the history of American education may help the beginning teacher understand his responsibilities. In the simple life of American pioneer days, the parent was the teacher. The child imitated the adult and followed in his footsteps. The parent showed the child how to do things. The child learned by imitation and trial and error. He had to learn, to survive. Infant mortality was high. The average life-span was almost thirty years shorter than it is now. Standards of living were lower. The level of civilization and culture was lower. Literacy for the masses was considered necessary, if at all, only for religious purposes. A few individuals of higher economic status might undertake formal education for professional or political purposes. Some few of the economically more fortunate persisted in the processes of formal education for greater understanding of man and the universe; or perhaps merely for the enjoyment of the pursuit of knowledge and the prestige accompanying its acquirement.

Soon, greater security, improvement in economic status, and increase in population permitted social groups to attempt the provision of a better life for their offspring. Education seemed to be the most promising means of attaining this

better life. Moreover, the State as well as the Church felt that literacy of the masses was necessary. Both these institutions felt that a certain amount of basic education was desirable for furthering their particular interests. Of course, the Church and State were not in exact agreement as to the nature of this education.

The reason for teachers. We see that the parent, the Church, and the State all sought teachers. The Church wanted teachers to promulgate its beliefs. The State wanted teachers to instill such social attitudes, knowledges, and behaviors as would preserve and improve the State. The parent wanted teachers as a substitute parent because of parental lack of time to train the offspring; or because the parent felt inadequate for the task. The Church, the State, and the parent join together in insisting that the children shall have these skilled foster-parents and guides.

The parent's feeling of inadequacy as a teacher came with his realization of the scope and use of knowledge. He began to realize that the useful products of man's experience have accumulated into staggering amounts of knowledge. As time goes on, even teachers seem to need more and more education, both to provide comprehension in the basic amounts of this social accumulation, and to provide techniques for short-cutting the student's vicarious experiencing of it.

The accumulating experience of generation after generation of man has been analyzed, epitomized, reduced to verbal or mathematical symbols, and turned over to the teachers to be made a part of the child's developing personality. The children are supposed to take on, in the few short years of formal schooling, the benefits of much of mankind's thousands of years of experience. The teacher's job is to foster the incorporation of this handed-down maturity in adjustment to life; this process of re-experiencing, symbolically and in epitomized form, eons of man's experience.

This vicarious and symbolic experiencing, called education,

is of necessity highly artificial. The pain of man's original experience is removed. The blunders and failures of succeeding generations do not appear. Only the short-cuts to the successful experience remain.

To make these abstracted summaries of the social heritage a part of the real life of the child is a very difficult task. Unless the teacher can make these experiences seem alive, real and applicable to life, the result is mummified erudition —a wide divergence from the ideal of a social Superman, wise from the experiences of all ages. Unless these school experiences reveal themselves in changed conduct and behavior outside the formal school atmosphere, the child has benefited very little.

Education for what? Mental hygiene, psychosomatic medicine, and common sense have combined to further the abandonment of the old religious concept of the "wickedness of the flesh." The dualistic mind and body theory is slowly changing even in practice to the "whole personality development" theory. A wholesome personality is one whose needs have been met to a considerable degree and whose training will aid him in meeting his needs in the future. But these needs are many. They are physiological demands for food, air, water, shelter, and physical activity. They are needs for feelings of safety and security. They include needs for affection, for self-respect, and for approbation and respect from others. Moreover, the human personality needs that feeling of self-expression, of self-realization that accompanies individual achievement. In other words, basic body needs, security against pain or danger, affection, regard and esteem from others, self-respect, and a confidence in being able to meet life's problems are the necessities for normalcy and an approach to happiness. These are the needs that the parents want the teacher to help the children attain. The basic principle of democratic government is that as many as possible of the present or future citizenry should be able to satisfy these personal needs.

Education by means of the physical. Physical education is one category of experiences through which the child's needs may be met. Functional efficiency seems to be highly dependent on energy supplies, on growth and development, on fineness and nicety of body controls, and on habits of recreation. Moreover, physical development, socio-motor skills, posture, and group-cooperative experiences contribute to the child's social status. Social status is a very important aspect of the individual's self-evaluation. Social status refers to the degree of prestige one attains in the social groups with which he comes in contact. Physical experiences which (1) foster growth, (2) develop skilled movements, (3) increase energy supplies, (4) furnish opportunities for success in social experiences, (5) redirect energies, and (6) resolve frustrations are examples of education by means of the physical.

"Subjects" an artificial division. Normal man is not split up into aspects. He is a physiological *unit,* a unit that makes all its contributions to the world through some phase of motor expression. Physical Education, as a school subject, has in real-life experiences no line of demarcation from other school "subjects." However, the line is usually quite definite in the artificiality of school compartmentalization. The same statement could be made in reference to any school "subject." The very nature of the school organization at present makes it necessary that each teacher use a subject ("teach it") as a means of helping the children satisfy other needs.

Learning social principles and disciplines. One learns to get along with people. He learns social principles as guides for group-cooperative activity. He learns such disciplines of behavior as industry, exactness, promptness, objective evaluation, and the like, in a variety of experiences which require these disciplines for success. To claim for any "subject" the responsibility for teaching these aspects would be contrary to the nature of generalized experience. These social traits and verities must appear in a variety of the child's experiences before they become a part of his personality. Only great

teachers seem to be able to accelerate markedly this incorporation, this personality growth. Only such great teachers *teach the child.*

Subject material only a means. The "subject" field represents merely some of the material which the teacher finds useful in developing the child. The teacher should have available in his repertoire knowledge from the basic phases of human experience. How else can he meet the exigencies of his job—the nurturing of a personality? Many teachers have found that physical education furnishes experiences very helpful in meeting the child's developmental needs. The better teachers, however, are limited neither by, nor to, a "field" of subject matter. They use a "field" both as an environmental background for learning activity, and as a *means* of emphasis on learning experiences.

Physical education, through its emphasis on (1) wholesome activity, (2) group participation, (3) skills for self-expression, (4) proficiency and ease in movement, (5) recreational and social tastes and skills, (6) self appraisal and (7) desirable attitudes, furnishes an excellent background and a fruitful means for satisfaction of human needs. There is a psychic and a physical therapy in enjoyable motor activity, and a means of self-expression in sports, the dance, in physically-active fun. The nature of the program makes an increase in biological fitness a concomitant.

Physical education is not a new experience for the race. It is impossible to think of man's development as being dissociated from physical activity. Most of our knowledge of prehistoric man is based upon evidences of what he has done —crude tools, drawings, shelters, all a result of physical activity. But, the machine age has brought the new experience which tends to rob man of the very types and intensities of physical activity that helped make him what he is. Physical education in schools is now attempting to help man adjust himself to the new conditions that accompany the machine age.

To foster the adjustment to modern living, the physical education teacher aids in the selection of only those activities that are beneficial in terms of the objectives stated above. He selects or creates an environment that is healthful. He adapts the program to the individual. He disseminates knowledge of and promotes desirable attitudes toward vigorous, healthful, and joyous living.

The supervised program of physical education also provides the school child with those "tools of participation" in recreation that enable him to spend his leisure time pleasurably and beneficially in out-of-school days and after-school years. Moreover, the games and sports, the team play, the group enterprises, are good bases for incorporating social attitudes and understandings and democratic principles of living.

The task of accomplishing these purposes of physical education is much more difficult than reading or writing about them. This fact, together with other challenges facing the teacher, causes him to seek the answers to many questions.

SECURING A POSITION [1]

The prospective teacher who carefully analyzes his selected vocation is confronted with several perplexing problems. Securing a position often ranks uppermost in the upperclassman's mind. Job-getting is so vital to the prospective teacher that it forces itself into this book as a primary consideration. Securing a position in any profession immediately raises the question of the qualities and characteristics demanded of the person desiring such employment. What are some of the traits and abilities that facilitate securing a position as a teacher of physical education?

Personality. A first major factor that operates in securing a position is personality. School superintendents as well as

[1] Office etiquette is discussed in Chapter 6.

leading teacher-trainers rate personality as the *primary* requisite of successful teaching. Personality has been variously defined and described; it is a complexity of many characteristics. At this point we are interested chiefly in those traits that count most in job-getting. They are appearance, speech, and carriage.

The aspects of appearance that call for special notation are dress, complexion, hairdress, condition of teeth, cleanliness, and facial expression. Speech also is a composite of several parts. Those that aid most in securing a position are pitch and texture of voice, rate of speech, enunciation, pronunciation, grammar, and freedom from "foreignisms." Carriage, although an aspect of appearance, deserves special emphasis. It is traditional in its value in securing positions in every vocation. The well-poised, well-postured candidate has "first call" over the slouchy, foot-shuffling, ill-poised candidate.

Persons who hire physical education teachers pay particular attention to the applicant's appearance, speech, and carriage. Boards of education know all too well that the pupil imitates his teacher more than he obeys the precept, "Do as I say, not as I do." The public has come to expect teachers of physical education to be living examples of their profession.

Versatility. The *first* trend that indicates the need for teachers of physical education to be versatile is the breaking down of subject-matter lines in the school curriculum. Evidence shows a possibility that the teacher of tomorrow must be prepared to integrate physical education so that it dovetails directly and positively into many other of the pupil's experiences. Integration, the core curriculum, fused teaching, or whatever the new emphasis may be called, demands versatility on the part of the physical education teacher.

The *second* condition indicating the need for the development of many abilities is that most beginning teachers secure positions in the smaller communities. The teacher of physical education should be prepared to teach one, two, or three

other "subjects." Such versatility greatly increases his chances for employment. It facilitates integration. In the future, such familiarity with other "subjects" will facilitate fused teaching or help make physical education fit into a core curriculum. The beginning teacher prepared to teach in three fields is not only three times more versatile than the beginning teacher with one specialty but has a six-to-one chance of employment over the latter, other factors being equal.

The *third* fact that emphasizes the need for versatility is the rapid development of the extracurricular activity program in schools. Many educational leaders believe that this program is more important, in terms of life values, than the curricular program of the school. At any rate, extracurricular activities have assumed a position of major consideration and importance in the school life. Therefore, school administrators are looking for teachers prepared to direct and guide this program, which means that the student-in-training who participates in such activities as music, dramatics, debating, publications, student organizations, and athletics is more in demand than the one-line specialist. One rarely sees a teacher's application blank from any school district that does not seek to discover the candidate's versatility in extracurricular activities.

Special attention is directed to the advisability of young men, in particular, to be prepared to coach athletics. Failure to participate in college athletics renders it difficult in many localities for a young man majoring in physical education to be "placed." Certainly few beginning teachers who are nonathletes make successful coaches if they secure a position on the strength of having "taken" a coaching course. Most of the outstanding leaders in physical education consider athletics as the "front door" into the profession. The same reasons indicate the necessity for young women majoring in physical education to participate in W.A.A. activities.

A *fourth* fact that points to the need for versatility is the

variety of duties performed by the teacher. Charters and Waples,[2] in a study that included thousands of experienced teachers, list 1,001 detailed activities. These authors do not pretend that theirs is a comprehensive list. It is merely indicative of what is expected of teachers. Recognition that the "whole child" goes to school, that environment is a force constantly influencing the child and his conduct, that the pupil's system of values is worthy of study and consideration, that education must move out of its academic stronghold to establish understanding relationships with members of the community, are a few of the trends that indicate and demand versatility of the teacher.

Professional aptitude. The need for versatility does not eliminate the importance of the prospective teacher's possessing special abilities in physical education activities and a "knack" for teaching them. Activities form the medium through which the physical educator educates the pupil. The teacher of physical education who lacks ability in activities can expect to attain no more teaching success than the teacher of English who does not know how to speak or write correctly.

The prospective teacher should also demonstrate some aptitude in teaching. Merely wanting to be a teacher is not an index of one's fitness for the profession. There are many vocational misfits in the world today. Some of these unhappy persons insisted upon entering a vocation in spite of being advised that their aptitudes pointed toward another type of work.

Teaching physical education is more than merely "telling" the pupils how to perform skills. It is more than "showing them how." Unfortunately, the prospective teacher is usually a poor judge of his ability as a teacher. The judgments of one's major professors, supplemented by tests, provide more accurate indices of one's "knack" for teaching. Such

[2] Charters, W. W., and Waples, Douglas, *The Commonwealth Teacher-Training Study*, pages 304–472. Chicago: The University of Chicago Press, 1929.

information should be desired by the student-in-training. It provides an answer to the question of one's fitness for the profession.

Scholarship. School administrators are giving close attention to the scholastic records of prospective teachers of physical education. Some time ago, the school administrator's chief consideration was the student's athletic record. This item may still be an important consideration, but, more and more frequently the opening remark of the school superintendent to the placement officer is, "I would like to see the records of your better students."

Scholarship is a permanent record of the degree to which the candidate applied himself to the more important tasks assigned to him in college. It indicates the extent to which the student recognizes the chief purpose of his college education, which, in turn, is an index of his maturity, his judgment, and his ability to weigh values. The scholastic record serves as a guide in determining the candidate's ability to carry through the major responsibilities assigned to him as a student. Such a record is a measure of the individual's ability to make proper use of his opportunities.

Contacts. "It is better to have one friend of great value than many friends who are good for nothing." This old adage is pertinent to the job-seeker. Most employers hire applicants they know best, other things being equal. The well-qualified candidate who is known to some member of the board of education has a tremendous advantage over other well-qualified candidates.

Prospective teachers should begin at least in the junior year of college to make contacts with persons who may help them secure positions. After such contacts are made, they should be renewed from time to time. The student should carefully select these persons who are to help him. He cannot afford to count on only one man, for this person may not be in a position to help by the time the student is prepared to teach.

School officials are becoming more circumspect in attempting to employ the right teacher. A photograph and application blank often are inadequate guides. An interview places the emphasis upon first impressions. Therefore, boards of education desire to hire a teacher who is known to them directly or has the enthusiastic support of respected citizens of the community.

Perhaps other factors should be considered in securing a position, but these five are of first importance. Failure to be prepared in one of them diminishes the chances of employment, because these same five abilities and characteristics, personality, versatility, professional aptitude, scholarship, and contacts, enable the teacher to be successful on the job.

QUESTION

What are some other vital traits or characteristics in securing a position?

APPROACHING THE JOB

After a teacher secures a position, he should write a letter of appreciation to the superintendent or the secretary of the board of education. At the same time, he should inquire as to the desirability of arriving in the community a week or two before school begins, as this period provides excellent opportunities to secure helpful information, make proper contacts, survey the situation, become acquainted with the community and with school procedures, and begin preparing to meet some of the problems.

Helpful sources. Upon arrival in the community, the new teacher interviews the superintendent as soon as possible. A great deal of helpful information and many hints and tips can be secured from the superintendent. He knows the scope of the work, the major problems, influential community members who may help, equipment needs, and desirable living quarters. He may give valuable tips about community attitudes. He

can refer the teacher to other sources of information. The school principal, the school nurse, and the school doctor also will have worth-while suggestions. Office secretaries and school janitors can offer invaluable detailed information if approached in the right manner on appropriate matters. The superintendent or someone in his office can be helpful in suggesting appropriate living accommodations in a desirable neighborhood. Such accommodations should be secured during the first day of arrival, if possible. The new teacher thus takes his first step in becoming stabilized in the community.

Making contacts. Frequently the first nonschool member of the community whom the teacher contacts is his landlady. The superintendent and principal, if approached in the proper manner, can suggest other contacts that might well be made sometime during these preliminary days. It is assumed that the young teacher has learned in college the importance of being a good listener and of stimulating the other person to talk of his interests.

Surveying the situation. After interviewing the superintendent and principal and securing living accommodations, the new teacher is ready to survey the facilities and equipment, check on such matters as previous locker-room procedures, availability of gymnasium costumes for indigent pupils, and policies regarding excused absences from physical education classes.

The school routine of getting the students from other classes to and from the physical education classes must be carefully planned. It is well for the new teacher to find out previous practices in his school system and conform to them. A friendly chat with one of the older teachers usually reveals information that will save the new teacher embarrassment. In some situations, after conference with the school administrators, certain changes in routine may be inaugurated. It is important that, before school starts, the new teacher work

out plans for all these routines in conformity with administrative policies.

The new teacher is frequently faced with discouraging problems of registration. If the physical education registration is done last, some classes may be too large, many classes may be extremely heterogeneous, boys and girls may be together, and the sizes of classes may not fit the facilities. The new teacher should plan his classes in accordance with equipment and facilities if it is at all possible to do so. At registration time he reports that a class should be closed when it is as large as the facilities permit, if this procedure is recognized in the school. If overcrowding does occur, the teacher should, at the earliest possible moment, get the schedule cards of the students in the large classes and work out with the main office suitable changes of schedules. (This statement assumes that such a procedure is practiced in the school.) In general the changes can be made most easily by the teacher himself. The main office then can send out notices of such changes. Relying on students to change schedules is usually unsatisfactory. If there are to be coeducational classes, plans must be made in advance so that suitable activities will be possible.

Plans for supervision of halls and locker rooms must be understood. In many schools the teacher cannot expect to await his classes on the playground or gymnasium floor. If suitable plans for roll-taking, activity assignment, and issuing of equipment are ready at the opening day, the work will move more smoothly. If the teacher does not plan to keep the pupils interested and busy, he can expect problems in discipline. This preliminary planning will take up much of the new teacher's time before school opens.

Getting acquainted with the community. The school administrator will be helpful in assisting the new teacher in learning to understand the community.

Community attitudes toward religion must be sensed. Any act that might in any way offend the most prudish of the com-

munity members must be avoided. Liquor, tobacco, dancing, card playing, and "dates" must be eliminated from behavior in many communities. One should not disregard the possibilities of local prejudices, however unreasonable they may seem. The youthfulness of the newcomer may be held against him. The spelling of his name, his race, religion, political views, manner of dress, or even stature may arouse community prejudices.

Many communities are critical of the new teacher who gives the appearance of being overinterested in adults of the opposite sex. The average community knows rather definitely the frequency and type of "dating" which a teacher may carry on. Teachers who are indiscreet in these matters create a delicate problem for the school administrator. Sometimes an otherwise excellent teacher loses his position merely because he fails to appreciate the fact that sometimes a community sets up standards of conduct for its teachers that are not applied to others in the community. Teachers who run counter to these standards are usually dealt with abruptly and severely.

Sometimes a new teacher discovers that an entire community is somewhat prejudiced against physical education, or against teachers of physical education. Such a community attitude has a background of experience. The new teacher confronts a difficult problem here—but not an insurmountable one. His speech, work, and social relationships will be governed with a view toward establishing and stabilizing himself and his field in the community.

Conservatism, competence, and community cooperativeness on the part of the new teacher will do much to prevent unfortunate first impressions. Any later modification from extreme circumspection in personal behavior must come only after there is reason for a conviction that the school administration and community will approve of such changes.

During the days previous to the beginning of school, the

new teacher might also become acquainted with the proper persons in connection with the press, P.T.A., leaders of youth organizations, and service clubs. Such steps lay the foundation for developing and favorably publicizing one's program.

QUESTION

What should the new teacher do during the one or two weeks before school begins?

RELATIONSHIPS WITH PUPILS

Discipline. Most superintendents and principals of schools want to know specifically of an applicant's ability to maintain discipline. This, however, is not the sole reason why beginning teachers give this problem considerable thought. The beginning teacher is aware of his inexperience. He easily recalls his public school years when he or his friends "tried out the new teacher"—particularly if the new teacher were "just out of college." He may recall instances in which parents or neighbors spoke in an uncomplimentary manner of Mr. *A* or Miss *B*, who could not "keep discipline." In addition, as a beginning teacher he knows the need of being respected. He realizes that without respect a teacher not only has a sorry time but accomplishes little and lacks the confidence of the community.

Many beginning teachers attempt the solution of disciplinary problems through the exercise of authority. This emphasis by the inexperienced is not surprising. The typical untrained way of handling individuals and groups is authoritative, dictatorial, autocratic. This fact is particularly true of persons who are on the defensive; and the young teacher is apt to be so because of a lack of self-confidence. Emphasis upon authoritative methods in maintaining discipline also grows out of confusion regarding what is meant by "maintaining discipline." If the student has in mind the stifled, pin-drop, response-to-command type of discipline, there will be

many demands for the use of autocratic methods. On the other hand, the wise teacher avoids top-sergeant methods. The teacher is a leader, a guide, an encourager, a stimulator, a challenger, more than he is a dictator. He represents authority but uses it only when necessary. The good teacher leads, and seldom orders, compels, or drives the pupil.

Frequently the beginning teacher's grave concern over disciplinary problems is unjustified. The teacher with a "knack" for teaching learns early that careful preparation, enthusiasm for and interest in his work, and a consideration of pupils' interests, together with other factors of leadership, eliminate the necessity for disciplinary measures in most situations. Discipline is best thought of as control measures used by the teacher to accelerate and motivate learning.

Nevertheless, in spite of assurances to the contrary, discipline remains a bugaboo to many beginning teachers. It will therefore be discussed in considerable detail in Chapter 19. Another problem which perplexes the beginning teacher, and one related to discipline, is that of "Social Distance."

Social distance. Many college students have experienced occasions and situations in which it was necessary to create "social distance," even toward their classmates. For example, as committee chairman, or as class president, the student has definite responsibilities to be accomplished within given time limits, which means that he has to lead, guide, and stimulate those who work with him. The position itself and the recognized responsibility placed upon him automatically create a certain amount of social distance between him and his followers—while he is in the role of leader. Social distance occurs in such situations whether it is purposely created or not.

Many students have also experienced the fact that one uses varying degrees of social distance according to persons. We permit a few persons to know us very well, and in such cases

the social distance is almost always negligible. We are fairly friendly with many acquaintances but increase the social distance with total strangers. Even with friends we vary the degree of social distance according to time and place, as do they.

Even such a factor as dress has a tendency to increase or decrease social distance, at least temporarily. Interestingly enough, social distance arising in this connection is sometimes imposed by the less well-dressed upon the better-dressed persons. A "newcomer" who wishes to be regarded as one of the group, adjusts his dress so that it is somewhat similar to that of the group. The city chap adjusts to his country cousin and friends, and vice versa.

Other factors operate in creating social distance, but at this point only one more will be considered. The person who is recognized by a group as being outside and "above" them often represents "prestige." The group expects Mr. Prestige to construct an appropriate degree of social distance and recognizes that he is justified in so doing.

These observations serve to illustrate the practical nature of social distance as a teaching device. It is at once a valuable and dangerous tool. Some students, prior to the period of directed teaching, fully appreciate the necessity of social distance between teacher and pupil. They find it difficult, however, during actual practice-teaching to use it appropriately. They ask such questions as these of their critic teachers: "How can I get the pupils to respect me, yet like me?" "How can I prevent the older girls (or boys) from getting too familiar in the study hall and downtown on the street?" "What can I do to keep the pupils from being overfriendly?"

Popularity with pupils. Most prospective teachers want to be considered "regular fellows" by their pupils. Yet every experienced teacher knows that this is a secondary consideration. The primary considerations are such accomplishments

as gaining the respect of colleagues and pupils, gaining their confidence, cooperating with the administration and with one's fellow teachers. The new or young teacher who is a seeker after popularity is slated for difficulty, disappointment, and perhaps failure. Generally speaking, the physical education teacher need not be concerned about being liked by pupils. He is offering a program which is (or should be) enjoyed by almost every pupil. If he teaches it effectively and interestingly, the pupils naturally associate him with the interesting, enjoyable program.

The beginning teacher is anxious to gain the confidence of pupils. One way to defeat the accomplishment of his desire is to "kid" pupils before he is well known, respected, and liked by them. "Kidding" invariably leaves the new teacher in the position of having the pupils reply in kind. Embarrassing situations arise, and at best the teacher loses prestige, their respect, and confidence.

The teacher maintains varying degrees of discipline and social distance toward the pupils, fitting as best he can the purpose of his work with the occasion at hand. Under normal circumstances he expects and tries to get along amicably with them.

Understanding the pupil. The proper times for, kinds of, and degrees of discipline or social distance are dependent upon, in large part, an understanding of the pupil, which includes other important factors besides his anatomical structure and physiological functionings. His temperament, home life, outlook on life, keen interests, associations, dislikes, strengths, weaknesses, and peculiarities are some of the other knowledges basic to an intelligent understanding of him. In short, the teacher must really know the pupil as a person—as a personality. How else can he appeal to, inspire, and guide him? Certainly there are no magic formulae that secure identical results and reactions from all pupils, or from any two, for that matter.

Respect and liking are usually accorded the teacher who can guide pupils with understanding. The excellent teacher is effective in stimulating conscientious efforts and hard work, and at the same time seeming "human" to the pupils. Pupils feel that such a "human" teacher understands them. They feel that he will work toward their interests and their welfare.

Relationships with pupils of the opposite sex. Occasionally a beginning teacher inadvertently creates jealousies and brings criticism upon himself. One sure way of accomplishing these two reactions is to hold protracted conferences with pupils of the opposite sex. In such cases the teacher is doubtlessly sincere in believing that such conferences are necessary and accomplish worth-while professional purposes. But teachers are usually judged in such cases on the basis of adherence to the rules of conventional behavior.

QUESTION

What does the teacher consider in establishing and maintaining proper relationships with pupils?

COMMUNITY MEMBERSHIP

Participation in community affairs. "But I was hired to teach, not to waste my time socializing," was the angry retort of a former student who had just lost his position. The superintendent had reluctantly dismissed him under community pressure. The crux of the matter was that this young man had refused to take part in community affairs. He was mistaken if he believed he was hired only to teach. He was hired as a teacher in that community. Whether it seems reasonable or not, most communities expect their teachers to participate in and support community projects actively. If, after a reasonable length of time, the teacher is not asked to enter into the affairs of the community, he should engage in some self-analysis. In fact, most physical educators develop into leaders of many activities of the community.

Most prospective teachers can appreciate these facts by remembering the reactions of the adults of their home communities toward teachers who did or did not participate in the community's affairs. The beginning teacher may be perplexed as to how much he can afford to engage in the life of the community. Usually an older member of the teaching staff or the principal can give sane advice in such matters. Experience has acquainted the older teachers with those types of community projects requiring staff support. They also know which projects can be side-stepped without creating a furor.

Certainly no teacher can effectively conduct his school duties and responsibilities and at the same time say "Yes" to every request for his time and financial support. On the other hand, the teacher of physical education may expect to be called on by the community more often than are the other teachers. He should accept gracefully those responsibilities which are possible for him to carry through with reasonable success.

Common sense, then, tempered by the advice of older teachers with social intelligence and by the knowledge that he has a real obligation in serving the community, is one of the guides.

Loyalty to the community. The new teacher must find his life in the community if he plans to succeed. Beginning teachers, particularly, too often succumb to the temptation to leave town over the week-end. If they are located near their alma mater, they want to return for dances, athletic contests, and other college affairs. This lack of maturity, lack of interest in the community that gave them a job creates barriers between such teachers and the community. Failure of beginning teachers to become a part of the community life forms one of the chief reasons why communities as well as school administrators hesitate to hire teachers who have just graduated from college.

Young teachers sometimes fail to recognize their implicit obligation and responsibility to the community. They fail to appreciate that the community often believes that teachers "think they are too good for us" when they leave the community over week-ends. Such teachers, because of this innocent ignorance, are often surprised when evidence of community antagonism or lack of cooperation is heaped upon their young shoulders. Yet they must rapidly get over the "college youth complex" and assume the role of a member of the profession.

Publicity. The experienced teacher of physical education knows that publicity is a two-edged sword. The teacher may receive favorable publicity for his program in the local newspaper. At the same time he may receive unfavorable publicity through the pupil-to-parent, parent-to-parent, teacher-to-teacher routes. Any new teacher of physical education should tactfully arrange contacts with the P.T.A. through the administrator of the school. If the teacher wants to make certain that the parents understand his program, its purposes and values, he should take every advantage of an opportunity to address them. If such a parent-teacher organization is lacking, visits with parents of pupils provide an avenue by which the teacher may gradually disseminate the correct information about his program and start building proper attitudes.

Articles for the local press should be carefully prepared and checked for accuracy before publication. Too much publicity often becomes a boomerang, particularly as regards creating professional jealousy among the other teachers.

QUESTION

What are the responsibilities and opportunities of the teacher in becoming a member of the community?

FITTING INTO THE SCHOOL

Colleagues as judges. While the formula of "sawing wood" at school may not wholly satisfy many communities, it comes closer to winning the approval of one's fellow teachers. When experienced teachers recognize that a young teacher prepares his work and is devoted to it, they begin to respect him. Conscientious and efficient work is the first step in gaining acceptance by one's fellow teachers. The teacher of physical education who attempts to "get by," whose conduct is unbecoming and inappropriate in the eyes of his colleagues, who is obviously a seeker after popularity, and who basks too comfortably in the sunshine of student-approval of physical education, can hardly expect to fit amicably into the company of the other teachers of the school. Such behavior prevents cooperation and acts as sand in the machinery of staff relationships.

Establishing a common ground. The beginning teachers of physical education should appreciate the fact that, superficially, the material and activities they teach place their duties in a different category from that of the teachers of academic subjects. But the general problems, principles, and techniques of teaching are similar, whether the subject is algebra or archery. The physical educator is obligated to make this fact evident to his colleagues at appropriate times and places in order to insure the success of his program and its fusion with the rest of the curriculum.

The assumption by some physical educators that their work has little in common with other school subjects encourages the tendency to "ride alone." This attitude, coupled with a certain independence that many teachers of physical education have acquired, makes it doubly difficult for them to be accepted readily and fully by their fellow teachers. One has difficulty in securing cooperation from his colleagues if he is regarded as an outsider.

Selling oneself to one's colleagues. The young teacher of physical education must also face another difficulty. The problem of "fitting in" is usually a different problem for him than for a young teacher of one of the long-established "subjects." Physical education is new as a school "subject." Its acceptance in some academic quarters has been slow. It has yet to earn its place in the minds of many teachers and some administrators. Every physical educator is a salesman in the broadest interpretation of that word. He must sell himself as a teacher to his colleagues if he expects them to accept him and his program.

Therefore, he must "speak their language," discuss their problems understandingly, show the similarity of their problems to his, and by his manner, attitude, speech, and work assure them that he is a teacher. Obviously, this statement means that he usually must go more than halfway to meet them. This sacrifice is one any salesman is glad to make if he believes in his product. It is the price that the pioneers in any field have always paid.

Cooperation with the administration. The new teacher is sometimes surprised to find that something he has done was at cross-purposes with the principal or superintendent. The teacher's first step is to find out the administrative rules and policies of the school. His next step is to support them. The new teacher obviously should not join the group who oppose the administration—and every administrator has his opponents. If certain regulations or policies seem unfair or not understandable, the new teacher might courteously tell the administrator, at the proper time and place, that he would like to know more about them. Usually some very good reasons are back of most rules and policies.

Athletic problems. The teacher of physical education is naturally interested in regulations pertaining to athletics. Schools encounter problems if an athletic program is not provided. Yet once it is introduced, new problems arise.

Financing such a program, supervision on trips, scholastic difficulties of athletes, eligibility, scheduling, and sportsmanship of spectators and participants are only a few of the problems in the boys' program. Many schools are faced with the highly controversial question of whether or not there should be interscholastic athletics for girls. Those schools that sponsor such a program add further problems to those related to the boys' athletic program.

The beginning teacher is perplexed at the complexity of these many problems and the far-reaching consequences that sometimes result. It therefore behooves him to work closely with the school administrator on all such problems. He should arrive at each decision circumspectly. Above all other considerations he must regard the welfare of the pupil and the school as basic. That is tantamount to saying that the policies of the school should receive his loyal support even if it means his being temporarily misunderstood by townspeople, colleagues, and pupils.

Cooperation with the "other" department. The boys' physical education department usually is given more favorable consideration and support by the school officials than the girls' department. One of the chief reasons given for this favoritism is that the former "makes the money" and gains the intense interest of the community through its athletic program. Too frequently antagonisms spring up between the two departments. If physical education is to prosper, if it is to become stabilized and deep rooted, physical educators must work together. The allocation of funds, facilities, equipment, and personnel should be made on the basis of and proportional to respective needs. No physical educator can be said to be fitting himself into the school if he fails to cooperate fully with his professional colleague.

QUESTION

What can the teacher of physical education do in order to fit into the school?

WORKING HOURS

It is not an uncommon sight to see some teachers, books under their arms, follow the pupils out of the building. But teachers of physical education are usually the last to leave the building. If the physical educator has no team to coach or assist with, there is the intramural program to conduct, officiate in, or help with; there are informal teams or unorganized groups interested in practicing or playing; there are groups to prepare for the coming operetta, circus, or demonstration; there are individuals such as those who have defects and deformities who need and earnestly desire special attention; there is equipment to check for safety factors and repair; or the gymnasium must be put in preparation for the evening adult recreation class.

The teacher of physical education never thinks of his position in terms of hours. He thinks of it rather in terms of services he can render. The clock-watcher has no place in physical education or any other profession. Many first-year teachers of physical education are surprised at how the day's work at school stretches into ten, twelve, or more hours. A very few of them write letters to their major professors, complaining of overwork. Fortunately for most teachers of physical education, these hours pass all too quickly because the work is interesting, challenging, and they are conscious of rendering vital services to pupil, school, and community.

QUESTION

Should the physical education teacher receive a higher salary on the basis of working longer hours than other teachers?

DEFERRED RESULTS

The young teacher tends to be enthusiastic, optimistic, and perhaps at times impatient for greater speed in pupil-learning. He wants to see accomplishment of great things in a short time. Enthusiasm and optimism are highly desirable traits of the teacher, but there must be understanding of the pupil and of the learning process or discouragement and skepticism may follow.

Complex habits are not likely to be formed quickly. The parent trains the boy for years in neatness and cleanliness before the results become apparent as personality traits. Every year, the coach trains a group of beginners without expecting them to achieve integration of skills, physiological maturity, or emotional control in that particular year. He is looking forward toward future development. He merely sets up an environment which fosters that development.

The older teacher foresees the awkward, impulsive, shy pubescent as the socially poised, coordinated leader of the twelfth grade. Years of observation have taught the older teacher that *learning takes time.* The same years of experience have taught him patience and a faith in the educative process. He has seen a generation of irresponsible and impulsive children turn into responsible citizens.

The beginning teacher will grow in his ability to foster student development. Such a teacher's self-analysis and self-criticism will help if it is based on an understanding of his job. Discouragement and self-blame for slow pupil-progress are usually unjustified in the conscientious teacher. Moreover, they dim the youthful enthusiasm of the beginning teacher, one of his greatest assets. This very youthful enthusiasm and energy of the beginning teacher will compensate for much of his lack of experience.

The beginning teacher must realize that (1) personality change in the student is a process of slow growth, (2) develop-

ment pauses on plateaus, (3) it may even pause until a later stage of physiological development, but that (4) the environment fostered by the enthusiastic, helpful, and sympathetic teacher is almost a *sine qua non* of pupil development.

All the teachers are trying to mold the pupil into a worthy citizen. The physical education teacher cannot accomplish this feat alone. The significant contributions the physical education teacher has to make are most effective when synchronized with the total school effort toward pupil development. This fact implies close teacher cooperation. For that matter, the school is not the only force attempting to mold the child. One can hardly ignore the influences of such agencies as church, club, theater, movie, camp, playground, vacant lot, street, alley, neighborhood library, newspaper, magazine, and the old swimming hole.

QUESTIONS

1. What do you think will be your chief problems as a teacher?
2. Why did you choose teaching as a career?
3. What traits and abilities do you have indicating success as a teacher?

SAMPLE TEST ITEMS [3]

True-False

1. The Church, the State, and the parent agree as to school policies and purposes.
2. School subjects are means to ends.
3. The child understands his own needs.
4. Personality factors that count most in job-getting are those that are seen and heard.
5. The teacher's carriage, speech, and appearance are frequently imitated by pupils.
6. Teachers of today need to be more versatile than the teachers of two decades ago.

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[3] The sample test items at the close of each chapter are for the purpose of provoking thought and discussion, tapping and forming attitudes, testing understandings and comprehensions, and creating felt needs.

7. A prospective teacher of physical education is a good judge of his ability to teach physical education.

8. A teacher of physical education, to succeed, must possess superior abilities in all physical education activities.

9. School administrators recognize that a prospective teacher's scholarship is the best index of his teaching success.

10. Other things being equal, most employers prefer to hire applicants they know best.

11. Arriving in town the night before school opens is early enough for the new teacher to prepare for the school year.

12. Two weeks before the opening of school most school superintendents are too busy to grant an interview to a new teacher about the local situation.

13. It is a wise policy for a new teacher to find out previous practices in the school system before school begins and to plan to conform to them.

14. Any changes made in previous local practices in physical education should conform to local administrative policies.

15. Registration for physical education classes should take place after all other classes are scheduled.

16. An effective opening-day's plan can circumvent many later disciplinary problems.

17. The prejudices of a community are the concern of the superintendent, not that of the teacher.

18. In order to gain the respect of the pupils the new teacher must show authority at all times.

19. Social distance is a delicate instrument in the hands of the teacher and can be an asset or a liability.

20. The teacher should be more desirous of gaining the pupils' respect than of seeking to be popular with them.

21. There can be no intelligent teaching unless the teacher understands the pupil.

22. Active participation in community affairs is one of the chief obligations of the teacher.

23. Favorable publicity in the press may serve as an obstacle to one's being accepted by his colleagues.

24. Most of the fundamental problems of the physical education teacher are similar to those of the academic teacher and so recognized by them.

25. Being accepted by one's academic colleagues is socially but not professionally important.

26. The new teacher should make up his mind as to whether he is for or against the administration and then have the courage to declare his convictions to others.

27. Other things being equal, physical education progresses best in situations where the men and women physical educators actively cooperate.

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2.

The Practical Versus the Theoretical: The Theorist Points the Way—The Practicalist Makes the Way

". . . we shall have learned but little unless and until we have mastered a valid theory of education itself founded on demonstrated scientific principle."—MORRISON

Meanings. Many teachers of physical education assume their work to be more practical than that in the "academic fields." This idea is based upon the proposition that pupils actually "do" something in physical education—that is, they are in "activity." Many teachers of industrial arts and domestic science believe their work is practical because its use is plain to see in the daily life of the community. A very few teachers of physical education still believe that physical education is practical only when the emphasis is placed on "how"—that when one asks "why?" he is becoming theoretical. They think their job is to show the student how to do things. They think objectives and purposes are "theoretical"; that activities should be assumed to be worth-while without any weighing, evaluating, and philosophizing.

These three concepts of the practical—(1) the higher the degree of activity, the higher the degree of practicality, (2) the clearer the evidence of specific active use in daily living, the more practical, and (3) guidance in *how* to do an activity is practical, but *why* to do the activity is theoretical, hence

less important—serve to illustrate vague, confused, and erroneous thinking.

This type of immature thinking reveals several weaknesses; for example, in regard to the first concept, reading or computing seem to be less active processes than typewriting or piano playing; yet one hesitates to consider the latter two of more immediate application in life. Baking a cake might be much less useful (practical) than learning the legal requirements of property ownership, of car driving, or of debt payment. If the physical education teacher bases his instruction on *how to do*, without regard for reasons for doing or not doing, the student loses interest and lacks judgment for future participation. If the teacher himself does not consider "why," he is very unlikely to hit upon activities best suited to the students' needs.

The word *theory* means a generalization based on much past factual experience with similar situations. If we make a generalization without many facts, we call it a guess or a hypothesis. If great numbers of facts tend to indicate that the guess is correct, the guess becomes a theory. After corroborative facts have accumulated over a long period, the theory is called a law. One speaks of the *laws* of nature but of the *theories* of electricity or light. The theories of the nature of matter have changed greatly in the last generation. These *theories* have become *practical problems* with us because of the atom bomb. Theories of what produces military fitness become practical problems when war requires rapid fitting of millions of men for military service.

The term *theoretical* is often used to show disapproval. Thus, a player says, "That coach is too theoretical," meaning that the coaching cannot be carried out in practice, in action. Perhaps the undergraduate occasionally falls back upon the term *theoretical* as a defense against admission of lack of knowledge or understanding.

QUESTIONS

These questions suggest answers that serve as guides in studying the following pages in this chapter:

1. May the criticism "too theoretical" be an indication of the critic's lack of experience? May such a criticism be a type of defense against strenuous mental effort in learning? May the criticism be a defense against confessing a lack of comprehension?

2. Should new teaching material be associated and interpreted for the learner in terms of his first-hand experiences? Is this usually possible in teaching physical education? How could this be done in a class of prospective teachers who are learning how to be teachers?

3. What theories do athletic coaches use? teachers of physical education?

4. Is there any difference in the level of "professional maturity" of the teacher of physical education now and that of the teacher ten years ago?

a. "An individual reaches educational maturity when he can in fact be trusted to guide his own further development . . . ." [1]

b. "He has to learn and learning requires time. As society grows more complex, he has to learn more. Maturity is deferred." [2]

THE THEORETICAL BECOMES PRACTICAL

The practical is meaningful. A twelve-year-old hopes some day to make the All-American football team. His older brother, a college football player, comes home for vacation. The boy expresses a desire for some "coaching." It usually is not long before, in the opinion of the twelve-year-old, the older brother becomes highly theoretical as he explains the intricacies of the game.

Some undergraduate professional students in physical education are discussing "program-building." The instructor

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[1] Morrison, Henry C., *Basic Principles in Education,* pages 305–307. Boston: Houghton Mifflin Company, 1934.

[2] *Ibid.*

points out that the pupils' needs and interests are basic factors to be considered in curriculum construction. He explains and elaborates his point. The matter becomes highly theoretical to these prospective teachers. They are interested chiefly in the names of some activities and how to play them.

Some prospective teachers of physical education consider only the activity courses practical. All other courses are theoretical, excepting perhaps parts of courses in which they are told precisely what to do in stated situations.

Occasionally an experienced teacher conversing with a novice gives this advice, "The first thing to do is to forget all that theory you learned in college. All you have to do is to select some activities and go to it."

These cases may show why students-in-training are skeptical of suggestions, discussions, and information that do not seem practical to them. But, what is practical? When are suggestions practical? When does something seem practical to us?

We place the label of "practical" on certain things that fit in with what we know, what we have done, and seen, and heard. If we can use or can see a use for something, we may be willing to call it "practical." However, as soon as the matter stretches beyond our experience or comprehension, we quickly apply the label "theoretical" to it.

Theory is confusing. Some prospective teachers feel that a discussion of the principles of teaching is confusing. They feel it unnecessarily switches their attention from practical aspects of teaching to the theoretical! Does not this bringing-in of theories make teaching needlessly more complex than it really is? How can one teach when he has to think about all these "extraneous things" about teaching? From where do these theoretical *dicta* come anyway? Cannot one become a successful teacher without using them? Were there not successful teachers before these theories were constructed?

It would require less preliminary work for the teacher to

present the same activities that he learned in his undergraduate days in the same way that they were presented to him. But both the students and the environment are different. Neither the specific teaching techniques nor the specific activities are likely to fit exactly the new situation. Teaching techniques should be fitted to the group to be taught and to the teacher's particular type of personality. Without a background of generalizations (theories) about how to (1) determine specific needs, (2) select appropriate activities, and (3) fit teaching techniques to the particular situation, the teacher must depend upon crude trial-and-error as a means of learning to teach.

There is no denying the fact that, *at first,* principles of teaching "get in the way." This condition is not surprising. A beginner in golf has difficulty in following the principles laid down by the "pro." What the novice wants to do is start participating. On the other hand, any beginner who receives instructions and wants to improve rapidly and to a considerable degree, must do three things. He must try out, apply, experiment with the suggestions given him. For example, the basis of all coaching lies in the assumption that the player will use and carry out instructions. Coaches usually discard the player who cannot or will not follow out the principles laid down.

A mature attitude may be assumed. The student-in-training who expects to succeed as a teacher does not dismiss teaching guides with a scornful wave of the hand even though they now may seem theoretical to him. This statement is particularly true when the novice realizes that the principles of teaching arise from the cumulative experiences of thousands of teachers of physical education, the findings of such sciences as anatomy and physiology, the present findings of psychology, and the best thought of leading educators and physical educators.

The novice teacher, therefore, might well reason along

these lines: "In spite of the fact that these principles seem theoretical to me, I'm going to try them out. Since these theories represent the best that sciences, near-sciences, experience, and careful thought of successful teachers can give, there must be something to them. So, I am at least going to keep an open mind, find out all I can about them, and try them out when I begin to teach. Then, after a fair trial over two or three years, I'll accept those that experience proves are practical and discard the others."

The teacher must consider the "how" and "why" of teaching. Merely "telling" is not teaching. He also must consider the "when," "where," "what," and "whom" of teaching in these modern times. "How" is method, "why" is purpose, "when" is time, "where" is location, "what" refers to the activities, and "whom" refers to the nature of the pupil. The complexity of the teaching problem astounds some prospective teachers because of their former ideas regarding the simplicity of teaching. They need to learn to assume a scientific attitude toward each reaching situation. (The scientific attitude suggests that we delay judgment until all the evidence has been gathered.)

The student-in-training should consider the fact that today's principles of teaching are the theories of yesterday which have been made practical through the experiences of many teachers. Experience turns the theoretical into the practical.

The point was made in a previous paragraph that prospective and beginning teachers often agree that activity courses are the only practical ones. Many persons hold the belief that, if an individual can *do* a given thing, he can teach it. Does it not seem logical that great performers make the best coaches? If a student-in-training can excellently perform the various physical education activities in the "major" curriculum, will he necessarily make a good teacher of those activities?

THE PRACTICAL BECOMES THEORETICAL

Performance. A good demonstrator, other things being equal, makes the better teacher, but occasionally an All-American athlete or a national champion proves to himself and others that he cannot coach. The "star performer" in physical education activities is in a more fortunate position than the "star athlete." This physical educator, being removed from the public eye, will not be criticized so quickly as will the young coach. The beginner who teaches only physical education may not develop so rapidly as the coach because the lack of pressure may mean that he will not become self-critical as quickly and thoroughly as does the young coach. Being a "star performer" in physical education by no means guarantees one's ability to teach physical education. When we ask "why," it is necessary to delve into the so-called "theory" of the matter.

Analysis of the activity. Coaching sports or teaching physical education activities—providing the instruction is intelligent and successful—is based on the assumption that the coach or teacher has analyzed the activity so that its principles are discovered and understood. These principles apply to such aspects of an activity as stance, skill fundamentals, offensive plays and systems, and defensive play. The person who has never coached or taught might call this analysis "theory." The person experienced in coaching and teaching would call it the *A B C* of practicality. The student-in-training who is fortunate enough to be given these principles in a class sometimes regards them as theoretical.

Analysis of self. The teacher of physical education must also be able to analyze his own performances in a general way. All experienced performers know from experience that they need so much of a "warm-up," they know what "tricks" work best for them, and they know about how long it

takes them to get "second wind." Merely being able to execute a pivot in basketball or "trap" in soccer, and merely having certain knowledge about one's own performance is not enough. The teacher must know when and how each movement is made, for this makes him a better demonstrator. It also aids him in calling the attention of the learner to vital points in performance.

A word of warning is inserted here for students-in-training. It is not suggested that pupils attempt too closely to analyze how they perform the various skills during participation. Such analysis is almost certain to lead to confusion. Psychologists illustrate the effect of performance and analysis by this little poem:

> The centipede was happy, quite
> Until the frog, in fun,
> Said, "Pray which leg
> Comes after which?"
> This wrought her up to
> Such a pitch,
> She lay distracted in a ditch
> Considering how to run.

Detailed self-analysis by a participant during activity shifts his attention from actual execution to the "how" and "when" of execution. This focus of attention on *form* interferes with the customary habit of focusing attention upon the *results* of performance.

Comparisons have been made between moving pictures of the performance of great athletes and the athletes' verbal descriptions of their performances. The great performance does not seem to be characterized by the performer's knowledge of his own detailed movements. In fact, great athletes have had their own performances carefully registered on film many times in order to discover just what detailed movements were made and what changes might improve performance. Highly skilled performers know the general form of skills

in their specialties. More and more details of movement become known to them as they gain experience in analysis of others.

The student-in-training is advised to attempt, first, analysis of others. Then he may attempt some self-analysis *after* participation. Confusion results from self-analysis during participation. It is extremely difficult to find out by self-observation how one actually executes skills.

Analysis of others. Ability to analyze the performances of another person is a teaching essential that can and must be developed. We find an encouraging number of prospective teachers who begin mastering this ability one, two, or three years before graduation. Some of them help teach the "service" classes in college where they begin to learn to analyze movements of others. Obviously, they are considerably ahead of the student-in-training who delays such development until after he begins to teach and coach. The student observer can begin to analyze the movements of others. He can draw tentative conclusions as to reasons for the successes and failures of their performances. He can mentally compare his tentative analysis with that expressed by the teacher or coach.

For example, a tennis player may serve his first "service" into the net 90 per cent of the time. Why? The observer's task is to analyze the execution of this skill until he discovers which of several fundamentals are incorrectly performed: grip on racket, body position, back swing, height and angle at which ball is tossed, stroke and point of contact, body angle and weight shifting, position of the feet, and "follow through." [3]

The prospective teacher must also learn to analyze his pupils in another way. If he is to be a successful teacher, he

[3] Expert analysts of sports, such as Alex Morrison in golf, supplement years of experience and proved observation with ultra-rapid photos before reaching final decisions on exactly how fundamentals are or should be performed.

must find out the *nature* of each pupil. The teacher will have to teach pupils that have such characteristics as being slow, emotional, sensitive, high strung, and irritable. Temperament, interests, peculiarities, physical condition, age, and body build are aspects of the student which should be analyzed. Teaching techniques must be varied to suit different individuals. Slow, awkward, phlegmatic pupils, as well as other types, can learn to be successful performers if the teacher knows how to teach them. Individuality in pupils necessitates corresponding readjustment of work methods.

Demonstration. We have seen that actual experience as a participant in an activity aids the instructor in teaching that activity, although it does not guarantee teaching success. The necessity of analysis in successful teaching has just been discussed. We now turn to another consideration. The experienced teacher, through analysis of many pupils over a period of years, knows those skills in which the average pupil will probably encounter difficulty.[4] He may therefore demonstrate these skills before the pupil tries to execute them, although not all good teachers do so. After the pupil begins to perform, the teacher combines analysis and demonstration. This cycle is repeated many times: pupil-performance, teacher-analysis, teacher-demonstration; pupil-performance, and so on.

Some teachers find it possible, in introducing a new activity, to have another class or an outside group present the whole activity. In other instances, a class takes a "field trip" to another school where the whole activity is presented by a class from that school. Such uses of demonstration usually foster

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[4] Skills vary in difficulty in five ways according to one of the authors: in "(1) the number of, and degree of concurrency of, movement parts involved; (2) the fineness of the movement individuation; (3) the variation of the force necessary for each of the movement parts; (4) the balance between inhibited and released movements; and (5) the temporal organization of the whole pattern." See Skinner, C. E. (Editor), *Educational Psychology,* Revised Edition, page 146. New York: Prentice-Hall, Inc., 1945.

desirable attitudes toward the activity. They provide a "pattern" of the whole activity before the pupils start to learn, and a good deal of interest is aroused.

Ways of demonstrating vary with instructors. Some teachers show the pupil how the latter performed. Some teachers exaggerate the incorrect parts of the pupil's execution, although some pupils resent this. Other teachers demonstrate correct performance, emphasizing those movements which the pupil has executed incorrectly. This type of teacher-demonstration is usually done slowly enough so that the pupil can *see* the movements, sequence, and timing of various body parts as well as the movement as a whole. A teacher may have a student who is a good performer execute the demonstration. The teacher's chief desire in the demonstration is that a correct "pattern" be set up for pupils to see.

Conclusions. The three steps mentioned above—pupil-performance, analysis, and demonstration—do not form the complete picture. When the beginning teacher stops with these three steps, he is attempting to oversimplify teaching. We often oversimplify when we attempt to be too practical. Three further steps are presented at this time. The first of these three steps is drawing conclusions. Following the analysis of the pupil's performance, the teacher attempts to arrive at the correct conclusion as to precisely what part of the performance is at fault and what the pupil should do to correct it. Let there be no mistake about the difficulty of this step. Analysis may show what is not successful but not why. Some teachers are able to pick out movements that produce unsuccessful results but unable to draw the correct conclusions from this analysis as to what the pupil should do to correct his errors of performance.

A basketball player who is normally a good "shot" experiences a "letdown." He has "lost his eye." What is wrong? The teacher begins to analyze each of the many movements made in "shooting a basket." This analysis may be care-

fully and precisely made, yet the conclusions drawn may be incorrect. This statement is well illustrated by the fact that two teachers observing the same participant may arrive at quite different diagnoses. Even the medical profession may experience this difficulty in the correct drawing of conclusions. Two doctors after examining (analyzing) the same patient may arrive at different diagnoses.

As a rule, it is advisable for the teacher to check his tentative conclusions by continued observation before talking to the participant. Otherwise, the player may be asked to make changes in the execution of skills which are already being correctly performed by him. In the meantime, the incorrect movements are still uncorrected.

Some teachers begin to talk to the pupil as soon as the latter performs erroneously or poorly. Most successful teachers remain silent until they are certain a correct diagnosis has been made. This "making sure" sometimes means analysis and re-analysis. In the meantime, the teacher is not confusing the pupil by hit-and-miss suggestions. The teacher discovers what the pupil needs to do in order to perform properly, helps him, and refrains from "expounding" upon it. It is useless to use such phrases as "try harder," "shoot straighter," "be more accurate."

Some participants are able to iron out their own mistakes. However, the teacher cannot expect the novice in an activity to be very successful in self-correction. After a pupil has been given considerable instruction, he should be encouraged to assume responsibility for some self-correction. The pupil's assumption of responsibility not only saves the teacher's time but fosters individual initiative and aids the pupil in developing self-reliance. Some teachers find it advantageous to have certain members of the class give constructive suggestions as to proper performance of skills.

Explanation. The teacher of physical education must successfully communicate to the pupil at least some of the con-

clusions of his analysis. To be successful, explanation must be understandable, brief as possible, pertinent, given at the appropriate time, assimilable, and presented in such a manner as to be suited to the individual. These six conditions are more than fine-sounding words. They determine whether or not the verbal statements of the teacher "take"; they determine the degree of attention secured; and they aid in determining the pupil's attitude and therefore his efforts.

The young teacher is apt to say too much. This act not only wastes time that could be utilized by the pupil in trying the activity again but also confuses the pupil by sheer multiplicity of words, and gives him too many things to think about. The novice teacher is anxious to show what he knows. He is very desirous of speeding up the learning process. Therefore, he is apt to "verbalize" so much that learning is thwarted and pupils' attitudes undesirably changed. Certainly giving too many directions and presenting too many skills to be learned retard learning and discourage the student.

Motivation. Explanation may precede, accompany, or follow demonstration. But the pupil must want to learn. Motivation, a desire for the learning, should be felt by the pupil if learning is to progress. Pupils, particularly during the early stages of learning, often need incentives, praise, and encouragement, especially since much learning proceeds by "trial-and-error."

The pupil should be continually guided toward larger objectives. He should be made to feel that he is making progress toward these larger goals, if he is, and gradually led to realize that mastery of smaller objectives leads *toward* fuller accomplishment of the larger goals. To score a "basket" once out of many tries is a success. It gives the pupil a taste of success. The teacher commends him and the pupil begins to see possibilities of greater recognition by the teacher and by his own associates. He enjoys the expression of his energy in a successful motor act. The

teacher indicates possibilities of greater and greater improvement. The pupil sees possibilities in this activity of satisfying part of his need for respect from others, for self-esteem, for enjoyable motor expression. He wants to know how he can learn faster. When he asks or infers this question, the teacher has the beginning of an ideal teaching situation.

Combining the theoretical and the practical. At least two parts of the foregoing discussion, performance and demonstration, are obviously practical even to the layman. The freshman "major" student would probably add "explanation" to this list of "practical" steps. The experienced teacher knows and most prospective teachers can see that each of these six general steps in teaching an activity is essential, and therefore practical. Motivation, demonstration, pupil-performance, analysis, diagnosis, and explanation—each has a definite place in the teaching scheme.

Teaching includes that which the layman understands as practical. It also includes much that some beginning teachers might call "theoretical." Teaching may therefore be thought of by the prospective teacher as a unification of the practical and theoretical. As the prospective teacher gains experience, that which he once thought of as theoretical moves into the category labeled "Practical."

The purpose of the following pages is to delve more deeply into an analysis of teaching. Only in this way will foundations be formed for building toward better teaching in physical education. The discussions that follow may at first add to the perplexities of the beginning teacher. Doubt provokes thinking, however, and perplexity precedes insight in the approach to and solution of problems.

SAMPLE TEST ITEMS

True-False

1. Physical education is more practical than any other school experience of the pupil.

2. Everyone understands that a theory is based upon known facts.

3. Many laymen consider as theoretical that which does not seem to be manifested in practice.

4. Broadening one's pertinent experiences usually results in broadening one's concept of that which is practical.

5. Those proposals seem practical that are related to one's first-hand experiences.

6. Athletic coaches are more practical than academic teachers because the former avoid theories.

7. Principles of teaching are cumbersome to most beginning teachers.

8. The prospective teacher should accept principles of teaching as permanent rules.

9. The more one knows about teaching, the more complex it is recognized to be.

10. It is a valid rule of teaching physical education that he who performs best in activities makes the best teacher.

11. The principles of teaching and the principles of performance in an activity are synonymous.

12. In the performance of activities, the teacher and the participant should be equally adept in self-analysis.

13. One can effectively teach physical education through good demonstration alone.

14. There are several good ways of demonstrating proper performance in an activity.

15. A teacher might be able to analyze a pupil's movements in activity but fail to reach the proper conclusion regarding why poor performance results.

16. In arriving at conclusions, most beginning teachers postpone judgment too long.

17. A teacher who draws proper conclusions regarding a pupil's failure to perform effectively in an activity is certain to explain clearly the pupil's difficulties to him.

18. When a teacher has effectively explained to a pupil his performance difficulties, the teaching process is complete.

19. Failure to perform an activity properly in itself always motivates a pupil to try again.

20. Length of years of experience is related directly to improved teaching.

PART I REVIEW TEST ITEMS

A. *Matching*

Below are two columns of words. Those in the left-hand column are numbered. Place a given word's number opposite the statement (in the right-hand column) that most closely corresponds to the meaning of that word. Grading plan: Number correctly matched.

WORD	NUMBER	STATEMENT
1. Principle		Most typical
2. Method		Execution of activity
3. Methods		Minute and critical examination
4. Philosophy		Proficiency in many things
5. Scientific approach		Of dissimilar abilities
6. Extrovert		Physical-education fields and plant
7. Performance		Ability to guide pupil behavior effectively
8. Personality		Crude type of humor
9. Versatility		Partially substantiated hypothesis
10. Survey		Moving pictures of skill performance
11. Homogeneous		A pellet-form of one's philosophy
12. Heterogeneous		Total of all influences upon the pupil, except inborn influences
13. Facilities		Aptitude in applying knowledge or skill
14. Equipment		Pertaining to man in his social relationships
15. Analysis		Factual study of the entire situation
16. Disciplinary ability		All factors included in the teaching process
17. Authoritative control		Degree of formality between persons
18. Social distance		Results, accomplishments

WORD	NUMBER	STATEMENT
19. Kidding		A word that may be used instead of "objectives"
20. Loyalty		Established by habit
21. Principal		Study of performance of a skill for teaching purposes
22. Theory		Human behavior, its prediction and control
23. Ingenuity		Cleverness in inventing and originating
24. Courageous imagination		Value, consequences, purposes
25. Hypothesis		Conclusion based upon facts and near-facts
26. Device for teaching		Top-sergeant methods of control
27. Psychology		General but concrete ends set up for attainment
28. Sociological		Pertaining to specialized training in a higher vocation
29. Art		A lead or suggestion to a certain response
30. Aim		Assumption based upon reasoning
31. Major objectives		Fairly permanent apparatus
32. Specific objectives		Of similar abilities
33. Outcomes		Sum-total of one's inborn and acquired traits
34. Professional		Ways of facilitating learning
35. Goals		Consideration of factual knowledge bearing on teaching
36. Conditioned		Detailed, concrete ends set up for accomplishment
37. Cues		
38. Demonstration (in teaching)		
39. Environment		
40. Average		

B. *Multiple Choice*

Below are listed some *major* statements followed by possible completions. Tell whether each completion is correct or incorrect and give the reason for your answer.

I. While still in college, the prospective teacher of physical education who is desirous of securing a position upon graduation should:

1. Cultivate the acquaintanceship of persons who can help place him.
2. Concentrate upon performance in activities and ignore the analysis of performance.
3. Collect from his professional courses exact solutions to his future problems.
4. Secure a professional background that will suggest methods of attacking future problems.
5. Concentrate upon one extracurricular activity.
6. Take measures to improve certain personality traits.
7. Specialize in activities rather than scholarship.
8. Specialize in health and physical education and one teaching minor.

II. Desirable steps that the teacher should take in approaching the new job include:

1. Interviewing the superintendent of schools.
2. Arriving in the community the day school begins.
3. Cultivating the acquaintanceship of the school janitor.
4. Surveying the job.
5. Establishing himself in the community by renting a room before doing anything else.
6. Maintaining his constitutional rights of freedom by ignoring community censorship of his personal behavior.
7. Going to church.
8. Being conservative in speech, dress, and behavior.

III. Before school opens the teacher should make plans for performing such duties as:

1. Providing activity costumes for indigent pupils.
2. Registering physical education classes before academic classes.
3. Understanding definitely routines of how classes are assembled, dismissed, and moved from class to class.

4. Turning the problem of crowded physical education classes over to the principal for solution.
5. Management and supervision of locker and shower rooms.
6. Playing a lone hand until colleagues have revealed their attitudes.
7. Following the principle that the administration is the "final word" and should be consulted in all plans.

IV. In maintaining proper relationships with pupils, the teacher should:

1. Insist on unquestioned obedience to all rules and orders.
2. Become popular as soon as possible.
3. Construct and post on the bulletin board all rules to cover all behavior problems that are apt to arise.
4. Relate personal experiences of success as guides to and ways of stimulating pupils.
5. Be "one of the boys (girls)."
6. Gain prestige by wearing a sweater with the college emblem, in directing physical education activities.
7. Show the pupils that he is one of the community by imitating local practices, dress, speech, and behavior.
8. Impress pupils with his fairness by treating them all alike.
9. Have "dates" only with older high-school pupils whose parents are very influential in the community.
10. Keep on the "good side" of pupil leaders by "kidding" with them outside of class.

V. In order to serve the community intelligently as a teacher, one should:

1. Participate in worth-while community enterprises.
2. Participate, when asked, in activities that foster religious attitudes in the community.
3. Avoid voicing or demonstrating opposition to community projects in which he does not believe.
4. Contribute to the community chest fund, if one exists.
5. Tactfully refrain from joining radical or intolerant organizations.
6. Sacrifice week-end pleasures for service in the community.

VI. The prospective teacher should use both the theoretical and the practical, by:

1. Understanding the distinction between theoretical and practical.
2. Recognizing that things which now seem theoretical may become practical, with experience.
3. Realizing that things not understood are useless.
4. Recognizing that activity courses are most valuable in professional training.
5. Understanding that pupil self-analysis should accompany pupil performance.
6. Recognizing that athletes tend to be analytical during their performances.
7. Realizing that the teacher should have the pupil focus attention on form rather than results for most effective performance in an activity.
8. Recognizing that a demonstration of a skill should be conducted at the same speed with which it is to be performed in the activity.
9. Realizing that conclusions as to errors in pupil performance should not be expressed until all doubt as to the correctness of the analysis is removed.
10. Recognizing that the teacher should constantly point out mistakes in performance.
11. Realizing that brevity, simplicity, and explicitness are essential in explanations of errors in performance.
12. Recognizing that pupils should be kept conscious of the place that very detailed performances play in achieving the larger units.

VII. Excellent teaching depends upon: [5]

1. An understanding of teaching method.
2. A creative and a courageous imagination.
3. Imitation of former teachers.
4. Skill-performance by the teacher rather than upon information and previous experiences of other teachers.
5. Hard work and routine procedures rather than enthusiasm and ideals of work.
6. Dramatic ability.
7. Personality.
8. Understanding the pupil.

[5] It will be recalled that one of the purposes of these sample test items is to create felt needs.

9. A philosophy of physical education.
10. The place the pupil is to play in a democratic society.
11. A knowledge of the facts and tools of science related to teaching problem.

VIII. In understanding the relationship of aim and objectives to teaching method, one should realize that:

1. Physical education is distinct from general education.
2. Social conduct and attitudes belong alone to the social sciences.
3. One can attain success as a teacher without an aim.
4. The leaders of physical education agree on the direction of their stated aims.
5. Objectives are a part of and lead toward the aim of physical education.
6. Organic vigor applies only to the elementary school level.
7. Recreation is not education.
8. Adaptive (corrective) physical education should take place in health education, not in physical education, classes.
9. Leadership is inborn and little dependent upon training.
10. Quick decisions and correct judgment in life are the result of physical education experiences.
11. Health is the aim of physical education.
12. Specific objectives are steps toward major objectives.
13. Teachers should emphasize one major objective in the program of physical education.
14. The coach of athletics and teacher of physical education have common major objectives.
15. Major objectives do not change with the passage of time.
16. Teaching method is a general term that includes methods of instruction.

IX. The question of value influences teaching method because:

1. What is valuable to one pupil is valuable to all pupils.
2. "The value to the largest number" is a democratic principle.
3. What is valuable at one time is valuable at any other time in the life of the pupil.
4. What is valuable in one locality is valuable in other localities.
5. All teachers agree that there is one proper order of teaching the steps for each activity.

X. The question of value influences teaching methods because.

1. Teachers vary in their ideas of what is most valuable for the pupil.
2. Teachers select the same activities because they agree that these activities have identical values.
3. The values that a teacher believes are inherent in an activity determine in part his methods of teaching.
4. The methods of teaching selected determine in part the values that are gained from an activity.
5. A teacher should use similar methods in teaching all activities if she is to gain similar values.
6. The content of physical education activities is essentially the same regardless of the activity.
7. The modern trend is to de-emphasize the value of knowledges in physical education.
8. The content of one physical education activity is obviously always the same regardless of emphasis, time, and place.

XI. Environment influences teaching methods because:

1. It affects the physical condition of the pupil.
2. It affects his emotional behavior.
3. It has little to do with pupil interest in or attention to the activity.
4. It does not detract from the interest of the pupil in the activity being taught.
5. The cues of the environment influence the efficiency of performance.
6. The reactions of pupils to the physical education environment are the same regardless of their home environments.
7. The academic classroom atmosphere can be made as stimulating to physical education activity as the playground or gymnasium.
8. It is useless for the teacher to change the environment.

XII. The teacher should understand that methods of instruction:

1. Are relatively inflexible.
2. Are used the same by different teachers.
3. Are similar regardless of how children learn.
4. Are valueless unless the children acquire the desired outcomes.
5. Include what the teacher fails to do.
6. Begin with where the pupil is and with what he can do.

7. Are very specific, and each is suited to a particular teaching situation.
8. As learned in professional courses are general and have to be adapted to particular situations on the job.
9. As recommended in professional courses are the best methods "on the average" but not adapted to all situations.

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II.

How Do We Approach Teaching?

3.

Seeking the Nature of Teaching

"Method is the master of masters."—TALLEYRAND

THAT OLD adage, "Look before you leap," is as applicable to a study of teaching as it is to a person diving into an unfamiliar swimming hole. Before plunging into a discussion of suggestions for the improvement of teaching, let us find out something about teaching. Is it easy or difficult, simple or complex? What does teaching include? What is the purpose of teaching? In other words, what is the *nature* of teaching?

Teaching, common. When one person teaches another something, a certain form of teaching is used. The various members of the human race have taught so much and so long that teaching is almost unthinkingly taken for granted as an easy task. Teaching is taken for granted by many men unless it interferes with their ideas, desires, or habits. "Those who can, do, and those who cannot, teach." This old quip is unfortunately rather typical of the layman's attitude toward teaching. How can teaching be difficult since anyone can teach?

Excellent teaching, uncommon. In all the teaching that has been conducted since the dawn of human history, how many truly great teachers have developed? You can probably count them on the fingers of two hands. Although the *things* taught to the offspring of society have changed (and

improved, we believe), comparable change toward improvement in teaching is lacking. Why is this? Why have the past few thousand years not produced other great teachers like Confucius, Socrates, Aristotle, or Christ? The very mention of these names places the standard of teaching very high. But let us lower this standard considerably. How many *excellent* teachers are there in the schools, colleges, and universities today? One answer might be, about the same proportion as there are excellent physicians, chemists, and engineers in these respective professions. And yet there is a difference. The standard of excellence for practice in these three professions has been raised considerably in the past two or more thousand years. The methods and practices of the medicine man, the alchemist, or the early "engineer" of Egypt are hardly comparable to the work of men today in these professions. More specifically, it is generally conceded by leaders in physical education that improvement in teaching has not kept pace with improvement in the program of physical education. In fact, some leaders believe that better teaching was done in the days of the formal program than is done today.

What kind of teacher will the prospective teacher make of himself? Will his students remember him as a good teacher, or will he be forgotten—one of those teachers who never made a lasting, commendable impression upon even one pupil? Will he be satisfied with being a mediocre or poor teacher, or will he strive toward excellency in his profession? These are questions that continually face prospective, beginning, and experienced teachers. Most teachers desire excellence. A few work hard enough to attain it.

APPROACHES TO TEACHING

The reader, by this time, may be saying, "All of this is interesting enough and is helpful, but I'd like to know more

about just what teaching is." A suggested general definition of teaching, appropriate at this time, is as follows: it is the "procedure taken to control the experience of the pupil." That is, whenever the teacher does anything to control the experience of the pupil, he is taking some step in the teaching process. Obviously, this control should be exercised so that the pupil or society will immediately or eventually benefit. An analysis of teaching reveals that there are several ways of looking at the "controlling" function of the teacher. The first of these may be called the philosophical.

Philosophical. Philosophy is interested in values, goals, and consequences. The philosophical way of looking at teaching is not interested in the question of how to play basketball, for instance. It is interested in what values there are in basketball now and later on for the participant, for the spectators, for the community as a whole. It is interested in the larger purposes of basketball and whether or not these purposes are valuable to the player and to society.

The philosophical approach to teaching is also interested in consequences and results. What are the actual outcomes of basketball? What are the consequences of basketball in terms of health, social conduct, and attitudes of junior high school boys—for instance, the members of a state championship high school team, or the college player chosen on the All-American team? The philosophical way of looking at teaching indicates that certain purposes be agreed upon between the teacher and the pupils for pupil-accomplishment, that these goals be valuable now and later to the individual and society, and that the actual consequences are beneficial to the pupil as a member of the social order.

Scientific. The scientific function in controlling the experience of the child refers to the use by the teacher of scientifically determined facts about the child and the environment. Some of these facts relate to the biological nature of

man, others to the child's physiology, anatomy, behavior, and reactions. Still others of these facts relate to geography, temperature, humidity, lighting, sanitation, and additional environmental factors. The teacher not only discovers these facts but applies them. This means that his teaching is modified in terms of these facts.

Psychological. The psychological approach to teaching is one in which the facts mentioned above are manipulated and adjusted to the uniqueness of the individual child. In this approach we are interested in controlling the child and his environment so that learning is made easier, more rapid, more permanent, or more interesting. The selection, use, and effects of certain principles and techniques of instruction are also a part of the psychological approach.

Sociological. When attention is shifted to the social outcomes and social implications of teaching we have the *sociological* phase of controlling the pupil's experiences. The emphasis here is upon teaching as it develops desirable social traits within the individual and the effects of teaching upon a particular group and society in general. Environment is controlled, activities are selected, techniques of instruction are used so that such traits as friendliness, respect for the rights of others, unselfishness, cooperation, and sociability are given an opportunity to be learned by and developed in the child. Through the sociological approach we see the chief concern of teaching as being the social relationships and social implications between the pupil and his classmates, the pupil and the teacher, the pupil as a present and future member of society.

QUESTION

In your opinion, which one of the four "approaches" to teaching would result in greatest value to pupils if applied alone?

Educational teaching. The four ways of controlling the experiences of the pupil profoundly influence teaching.

Omit one of them, and teaching becomes incomplete and inadequate. Fail to include one of them, and teaching does not fully "control the experience of the pupil."

These four approaches fuse and unite in good teaching.

The fusion makes teaching educational. The teacher, of course, may emphasize one or more of the four as his judgment indicates. The activities selected, the techniques of instruction used, the environmental setup, the objectives selected, all vary according to which of these four "controls" the teacher wishes to stress.

Figure 1 illustrates the general pattern of teaching method.

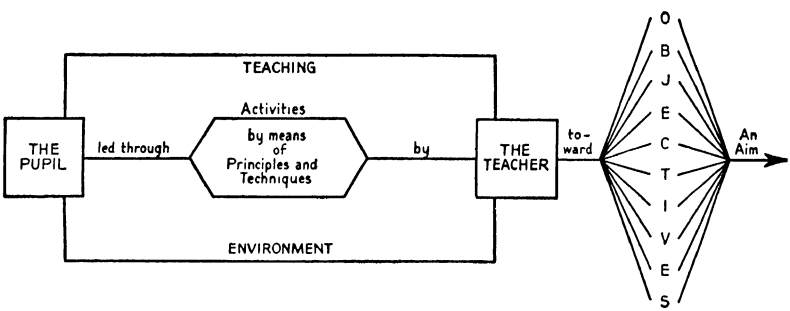


FIGURE 1. SIMPLE DIAGRAM OF THE TEACHING PROCESS

This simple diagram does not show that throughout the entire process the teacher may emphasize one or all of the four kinds of controls of the child's experiences and that all four controls are to be considered. The sketch is to be interpreted neither as a set procedure nor as a comprehensive picture. It merely illustrates the point that physical-education activities as well as the principles and techniques of instruction are the *means* by which the pupil is guided and led by the teacher toward the accomplishment of certain outcomes.

QUESTIONS

1. In the diagrammatic sketch, why are both the pupil and the teacher placed inside and outside of the "Teaching Environment"?

2. If physical education consists chiefly of activities, why is the term "Activities" relegated to a somewhat minor position in the diagram?

TEACHING—ART AND SCIENCE

The art of teaching.[1] Teaching, medicine, engineering, and such sciences as chemistry demand certain qualities of persons to succeed in these fields. Some of these qualities are:

1. A creative and courageous imagination. Creative imagination is most useful in solving problems. It occurs most frequently in a mind "saturated" with information; in a mind full of knowledges based upon ability in skills and well acquainted with previous studies in the field. In periods of relaxation, various ideas from this wealth of background "pop" into the mind in new arrangements. Often these new arrangements solve the problem. The individual is said to have created a "new" idea. Courageous imagination allows the individual to rearrange these bits in ways contrary to custom and tradition. Consider the courage of Thomas D. Wood and others in thinking out the "Natural" program of physical education in a field dominated by the tradition and authority of formalism.

A creative imagination is basic to ingenuity in the teacher of physical education faced with such practical problems as having inadequate facilities and equipment, making the most of limited material for athletic teams, or educating a backward community to the newer ideas in physical education.

2. A mastery of information, skills, and previous work. This mastery not only is basic to a creative imagination but also is essential to success in the professions. Authorities consider this mastery as one of the most pertinent factors in

[1] Ruediger, W. C., *Teaching Procedures*, pages 9, 10. Boston: Houghton Mifflin Company, 1932.

Williams, J. F., Dambach, J. I., Schwendener, Norma, *Methods in Physical Education*, pages 48–50. Philadelphia: W. B. Saunders Company, 1937.

teaching success. Without such mastery, how can a teacher properly select activities and techniques of instruction, set up desirable goals of accomplishment, or properly adjust the activity to the learner?

A teacher might well adopt the attitude that he cannot know enough about his field. A teacher is never completely prepared for his profession. He must continually be on the alert for new information, new ideas. He must continually master the new and remain master of part of the old.

3. Enthusiasm.

4. High standards and ideals of work.

5. Projection of teacher's personality. In addition to these qualities that apply to the professions in general, teaching demands the projection of the teacher's personality into what is being taught and into those being taught. The excellent teacher makes his subject live and alive by putting his personality into it. He makes his pupils live that which is being taught. How? Through energy and the zest of his presentation; his dramatic ability as expressed in demonstration, facial expression, and voice intonations. He senses and associates the individual pupil's vivid experiences and their systems of values with the new activities being taught. The teaching of an excellent teacher, therefore, "sticks."

One reason why medicine, engineering, and the natural sciences have advanced more rapidly than has teaching may be that these other professions have developed and used scientific principles and methods. It has been only within comparatively recent years that the "science" of teaching has received much attention. The point is not to be overlooked that better teaching is probably related to the advances in medicine, science, and engineering.

QUESTION

Which one of the five qualities included in "the art of teaching" do you consider most important? Why?

The "science of teaching." Teaching as an art is almost ageless. Teaching as a kind of applied science is in its swaddling clothes. In a sense, the term "science of teaching" is inaccurate. Teaching deals with human beings. They are variable and largely unpredictable in what they do. They have age-old emotions and resistant nervous systems. The members of the human race have a way of refusing to be placed into compartments and categories. It therefore seems to be stretching a point to speak of a "science of teaching."

What is actually meant is that we need more scientific teaching. Teachers should formulate *principles* and use them in their work; should *experiment* in order to find out those principles and techniques that seem to bring results most effectively with a majority of persons in most situations; should formulate and use more *laws*, such as the major and secondary laws of learning; should formulate and test more *theories* and *hypotheses* as to how persons in general may be expected to behave in certain specific situations; should invent *devices* for or adapted to teaching in order to make it more exact, more objective; and should use more *tests* to evaluate and measure the outcomes of teaching.

The italicized words represent some of the "tools" which may be used in making teaching more reliable, more accurate, more predictable of results. These "tools" at present are largely undeveloped. The few principles, laws, hypotheses, devices, and tests now available are not used by a good many teachers. If the teaching of physical education is to be improved, the available principles and laws pertaining to teaching must be actually used and applied by teachers. Otherwise they are as useless as modern medical instruments and practices in the office of a physician who refuses to use them.

The beginning teacher will find that to follow "best guess" techniques of teaching is easier than to apply the principles of teaching. He will also find it more convenient to use specific techniques recommended for each detailed teaching

situation. Principles "will be eternally getting in the way, like a thimble in the early stages of sewing." [2] However, the incorporation of the scientific tools by the teacher is a way toward better teaching.

It should be clearly understood that these scientific tools of teaching are not intended to replace in any way the qualities listed as part of the art of teaching. Rather, the two supplement each other.

QUESTION

How can teaching be called scientific merely because it uses tools that have names similar to those used in the exact sciences?

TEACHING DEPENDS UPON AN AIM AND OBJECTIVES

Teaching and an aim. Ask a man his aim in life and you will receive a concentrated form of his philosophy of life. Ask a man his aim of physical education, and he gives you a pellet form of his philosophy of physical education. A given teacher's teaching is tremendously influenced by his aim of physical education.

For example, the aim of physical education ("training") used by military and naval organizations during World War II was to develop and maintain a high degree of those aspects of physical fitness needed for the specific type of service. Thousands of teachers of physical education who taught in the armed services' physical training programs adopted this aim. The acceptance of a different aim than they had during peace time changed their teaching techniques, their emphases, some of their teaching principles. Moreover, changes in the content of the program that they had followed previously resulted.

The environmental setup, the purposes toward which teaching is directed, and the understanding given to the children

[2] Ruediger, W. C., *Teaching Procedures*, page 9. Boston: Houghton Mifflin Company, 1932.

as to what physical education is, will vary greatly between two teachers. The selection of an aim of physical education is the first vital consideration of the teacher.

An aim may be defined as a general and high ideal or remote end toward which one is striving. The statement of the aim is so worded that it seems possible of attainment. If one constructs an aim that is accomplishable *now*, it is not considered to be an aim; rather, it is regarded as an objective. It is not remote enough to serve as a guiding star, to serve as a challenge for future striving. If it is accomplished, what guide remains for further progress and improvement? An acceptable aim of physical education obviously must lead the teacher to teach in such a way that the pupil will fit into society and add to its advancement.

Some stated aims. Several leaders in physical education have constructed aims of physical education. Let us refer to them at this time to see how they compare:

> Physical education is that phase of education which is concerned, first, with the organization and the leadership of children in big-muscle activities, to gain the development and the adjustment inherent in the activities according to social standards; and second with the control of health or growth conditions naturally associated with the leadership of the activities so that the educational process may go on without growth handicaps.[3]
>
> It must be clear, therefore, that a naturalized program of physical education definitely aims to obtain, as physiological results from its activity program, normal growth and function, vigor, hardihood, and endurance. In a natural program much emphasis is put upon the social and mental qualities which hitherto have been largely neglected and underestimated in connection with physical education activities, but such emphasis is made with a full understanding of the needs of normal physical growth and development, and with a confirmed belief that, if the environment is hygienic and the child is unhampered by abnormal physical conditions, a naturalized program will secure the essential physiological and hygienic values

[3] Hetherington, Clark W., *School Programs in Physical Education*, page 45. Yonkers-on-the-Hudson, New York: World Book Company, 1922.

within its sphere of influence as by-products. The possibilities are limitless in such a program to produce citizens who are physically normal, mentally alert and progressive, socially unselfish and cooperative, and morally sensitive and contributive to the group good.[4]

Physical education should aim to provide skilled leadership and adequate facilities that will afford an opportunity for the individual or group to act in situations that are physically wholesome, mentally stimulating and satisfying, and socially sound.[5]

The aim is social efficiency. The final aim should be an individual better equipped to meet the demands of the society in which he lives and to make contributions to that society.[6]

The aim of physical education is to contribute to the individual's social effectiveness and personal welfare through guided participation in physical activities.[7]

Organized physical education should aim to make the maximum possible contribution to the optimum development of the individual's potentialities in all phases of life, including his finest possible capacity for adjustment to the world in which he lives, by placing him in an environment as favorable as possible to the promotion of such big-muscle and other responses or activities as will best contribute to this purpose.[8]

Physical education is the contribution made to the complete education of an individual through the psycho-motor or large muscle activities. For school purposes physical education includes such activities as athletics, rhythmics, games, sports, and related activities.[9]

Agreement in aims of leaders. Some people disagree on these aims.[10] It is true that there is an ever-changing concept of physical education, as might be expected of any field as young, or in any field that keeps pace with this ever-chang-

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[4] From Wood, Thomas D., and Cassidy, Rosalind, *The New Physical Education*, pages 69, 70. By permission of The Macmillan Company, publishers.

[5] Williams, Jesse F., *Principles of Physical Education*, page 250, courtesy of W. B. Saunders Company.

[6] Wayman, Agnes, *A Modern Philosophy of Physical Education*, page 85, courtesy of W. B. Saunders Company.

[7] The authors.

[8] Nixon, E. W., and Cozens, F. W., *Introduction to Physical Education*, page 85, courtesy of W. B. Saunders Company.

[9] Oberteuffer, D. O., *Health and Physical Education Series*, Vol. III, page 12. Columbus: Department of Education of the State of Ohio, 1932.

[10] Staley, S. C., *The Curriculum in Sports (Physical Education)*, pages 97–101. Philadelphia: W. B. Saunders Company, 1935.

ing world. Yet, considering the diverse sources of American physical education and the resulting pressures for dominance in it, the above-mentioned statements of the aim of physical education agree in their *direction.* This point is not important after all, for physical education could hardly have made the strides it has in recent years without this united effort toward a similar general aim.

It therefore appears that almost all the leaders in physical education are in general agreement today as to the general direction their profession shall take. Why then is there some disagreement among the teachers as to the teaching of physical education? One reason may be because different teachers interpret a given aim in different ways. Another reason may be because some teachers are not aware of or sufficiently familiar with the ideas of the leaders in physical education and education.

Similar disagreements occur in interpretation of and familiarity with religions and forms of government. Yet the basic aim of a given religion remains about the same for its various denominations and sects for a given period of time. The same can be said of the platforms of several given political parties within a given form of government. It is not uncommon for men in any walk of life to agree upon an aim but disagree as to how they shall try to reach it.

In any case, the relationship between teaching and the aim of physical education is fundamental and inseparable. The teacher of physical education, therefore, selects his aim of physical education with care and reflects upon its implications.

In the selection or construction of an aim, the point hardly need be mentioned that any teacher's aim of physical education should be compatible with the aim of all education. Physical education is taught in an educational environment to children who are sent to school. Furthermore, teaching must be compatible with the principles of education. These emphases upon the necessity of physical education aligning

itself with general education have appeared in literature repeatedly in recent years. Yet the actual practice lags in certain quarters. This lagging, this lack of cooperation, this failure to make physical education an integrated phase of general education, is a force that prevents physical education from advancing in certain areas. It is not difficult to understand that such backwardness is harmful to the profession as well as to the pupils who are exposed to a type of physical education that is antagonistic to the best practices in general education.

QUESTION

What are three differences in the teaching of physical education in a nation whose aim of physical education is one of preparation for war and a nation whose aim of physical education is "the good life"?

Aim and objectives. While an aim refers to a remote, difficult-to-reach end, objectives are more concrete and definite and therefore more readily attainable. Most authorities in education divide objectives into major and specific categories. Major objectives may be thought of as less general than an aim and more general than specific objectives. Major objectives lead *toward* and are "sanctioned by" the aim. Each major objective might be represented as a stairway leading *toward* the aim. Each landing of each stairway represents the lesser objectives and is a part of its major objective that leads *toward* the aim. Each step leading to each landing represents the more specific objectives. Specific objectives may be refined into more definite, concrete, immediate, attainable, measurable units. These very detailed objectives, sometimes called "goals," are not shown in Figure 2.

Stated major objectives. The major objectives as viewed by some authorities are:

1. The immediate objectives in the organization and the leadership of child life as expressed in big-muscle activities.
2. The remote objectives in adult social adjustment or efficiency.

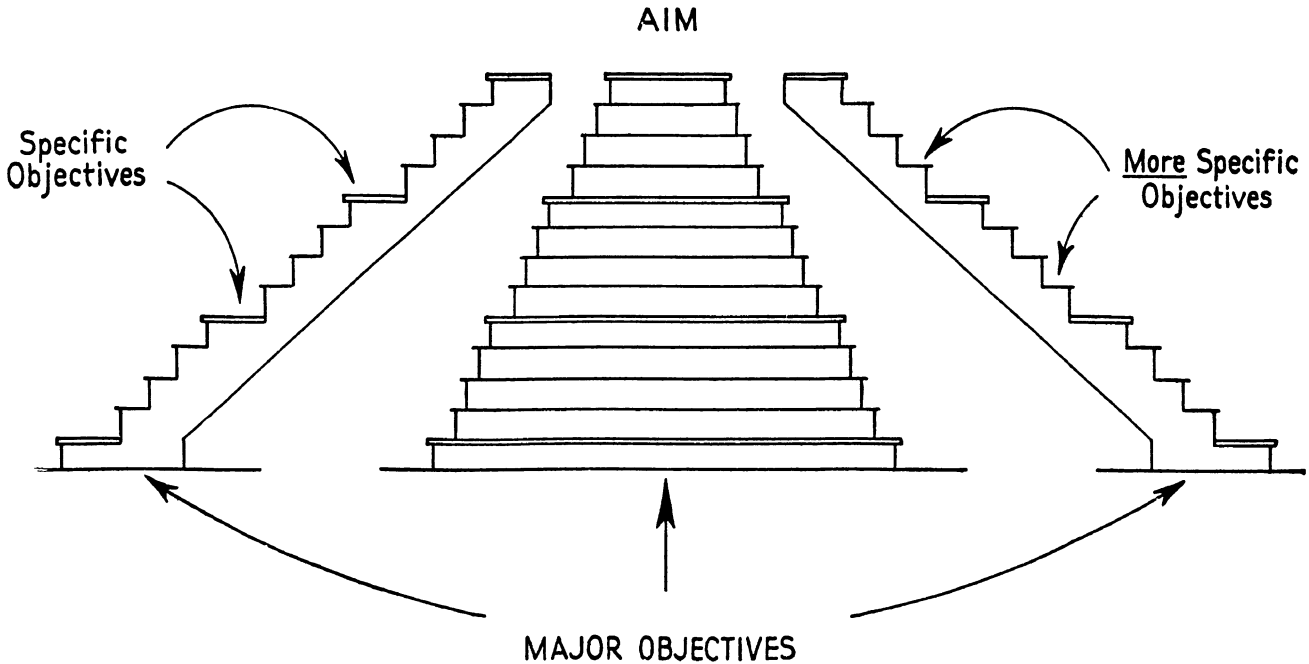


FIGURE 2. SIMPLIFIED SKETCH OF THE RELATIONSHIP BETWEEN AN AIM AND OBJECTIVES [11]

[11] See the following chapter for further development of "Objectives."

3. The objectives in development—
   a. The development of the instinct mechanisms.
   b. The development of the intellectual mechanisms.
   c. The development of neuro-muscular mechanisms and nervous power.
4. The objectives in the control of health conditions.[12]

* * *

1. The practice must provide physiological results, scientifically determined, indicative of wholesome, functional activity of organic systems, and sufficient for the needs of the growing organism.
2. The practice must have meaning and significance for the individual and should provide a carry-over interest.
3. The practice must provide opportunity for the individual to satisfy those socially desirable urges and impulses of nature through engagement in motor activities appropriate to age, sex, condition, and stage of development.
4. The practice must offer opportunity to the individual under wise leadership to meet educative situations as one of a social group.[13]

* * *

1. Developing organic power, stimulating bodily growth and development, and developing certain physiological resistances, through participation in beneficial types of physical education activities.
2. Providing opportunities for the establishment and continuance of those habits of healthful living related to participation in physical education activities.
3. Developing safety, recreational, and utility-in-life skills and controls, useful or pleasurable now or in out-of-school life, through participation in selected physical education activities.
4. Developing desirable attitudes as a participant in physical education activities, and toward physical education.
5. Developing desirable social traits that are related, directly or indirectly, to participation in physical education activities.
6. Providing opportunities for the individual to satisfy his desires for selfhood through individualized teaching and suitable organization of the program of physical education activities.[14]

Again we see considerable similarity in published state-

[12] Hetherington, Clark W., *School Program in Physical Education*, page 20. Yonkers-on-the-Hudson, New York: World Book Company, 1922.

[13] Williams, Jesse F., *Principles of Physical Education*, pages 412–418,

ments as to the general directions physical education should take. There seems to be generally fair agreement as to the main emphases to be given physical education. When viewed in another way, major objectives indicate the major emphases which should be made in the physical education program. And for that matter, major objectives may be set up as general criteria or general standards for judging whether or not a given physical education program is measuring up to what it is supposed to do. Williams [15] regards major objectives as "standards for judging physical education practice." There are also writers who prefer the term "general purposes" to the term "major objectives."

The reader should not be confused by this lack of agreement in terminology as used by various writers. The point is that, regardless of the name given to major objectives, they are the major attainable ends toward which physical education is being directed. Although there may be some disagreement in terminology, the actual ends to be accomplished in physical education, as conceived by the leaders, are similar. Is not this the more important consideration?

LaPorte has compiled a list of ten "comprehensive objectives." These are less general and more concrete than any one of the four groups of major objectives mentioned above. They are presented here to illustrate further that, just as an aim is broken down into major objectives and thus definiteness accomplished, so major objectives may be broken down progressively into more detailed, concrete, and immediate objectives. LaPorte's ten comprehensive objectives are:

1. Developing useful and desirable skills in aquatic, gymnastic, rhythmic and athletic activities for both developmental and avocational (hobby or carry-over) purposes.
2. Acquiring comprehensive *knowledge* of rules and techniques and strategy of above activities suitably adapted to the given age level.

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[15] Williams, Jesse F., *Principles of Physical Education,* page 361. Philadelphia: W. B. Saunders Company, 1944.

3. Developing acceptable social *standards, appreciations* and attitudes as a result of intensive participation in above activities in good environment, and under leadership that is capable and inspired.

4. Developing essential *safety skills* for self and others.

5. Effecting the removal or modification of *remediable* defects, based on adequate physical and health diagnosis.

6. Developing normal conditions of the body organs and *functions* including postural mechanics.

7. Developing power of *self-expression* and *reasonable self-confidence* and emotional control (poise) by mastery of difficult physical and social problems in activity.

8. Developing *leadership capacity* through the medium of actual responsibility for activities under careful supervision.

9. Developing powers of *observation, analysis, judgment,* and *decision* in complex mental-physical situations.

10. Developing essential *health habits, health knowledge,* and *health attitudes* as results of specific instruction and supervision.[16]

The point is again emphasized that a teacher must set up an aim and select major objectives of physical education. Only in this way can his teaching be purposeful, stable, and free from aimless wandering.

QUESTION

Which set of objectives do you consider most comprehensive? Most attainable?

TEACHING TECHNIQUES AND OBJECTIVES

A physical educator made this remark not long ago: "I've finally found the secret of how to gain a national reputation. All you have to do is choose one small part of the field and ride it hard. Talk about it, experiment with it, concentrate solely upon it, write about it." He was stopped short when a colleague replied: "Yes, but what about the remainder of your program? And, more important, what about the welfare of the pupils who participate in a program with such narrow emphasis?" The *personal* and *professional* objectives

[16] LaPorte, William R., *Administration of Physical Education in Secondary Schools* (Revised Edition), page 13. Univ. of Southern California, 1935.

set up by the teacher for himself are one thing; but the objectives for pupil-accomplishment are another and a primary consideration. Fortunately, only a few teachers fail to see that their own objectives profoundly influence their teaching and therefore the pupil. A teacher's personal objectives must be higher than a way of gaining a national reputation through limiting the value of physical education for children.

A discussion of teaching techniques automatically assumes that worth-while objectives have been agreed upon. The various aspects of teaching techniques in physical education are considered in terms of certain objectives to be accomplished by the pupil and in terms of principles. Consequently, just as an aim partially determines the quality of teaching, so objectives partially determine the types and directions of teaching techniques.

Many years ago, the objectives of physical education were conceived to be the accomplishment of such attributes as military discipline and large muscles. Today, the objectives have been changed to such acquirements as self-discipline and skills for safety. Teaching techniques become quite different when the objectives set up for the pupils are changed to such a degree. The teacher therefore continually asks himself: "What is it I am trying to do for and with these pupils, and why?" The objectives of physical education are the "highway signs" for the techniques of teaching.

It must be apparent that the mere selection of an aim of physical education and the formulation of objectives are empty gestures if the teacher does not find ways of accomplishing or striving *toward* these worthy ends.

QUESTIONS

1. Is it possible to teach physical education without having objectives?
2. If so, give an example.
3. If not, why should a teacher be satisfied with any but the best objectives?

TEACHING AND TECHNIQUES OF TEACHING

It is necessary at this time to make a distinction between teaching and teaching techniques. We have seen that teaching is a general process that embraces all factors and forces that enter into the whole teaching situation. It includes the pupil, activities, techniques and principles of teaching, teaching environment, the teacher, objectives, and an aim. Teaching also includes the evaluation of results—that is, what objectives are actually accomplished, to what degree are they attained?

It is clear therefore that teaching techniques form only a part of that larger process which we call "teaching." Techniques of teaching are the special and detailed ways used by the teacher to direct the pupil's learnings. The techniques used by even one teacher are multifold. The teacher uses many "tricks" to help the pupil understand and learn.

The teacher demonstrates how to execute a "bully" in hockey or a "block" in football, illustrates errors or right performances in certain skills, and gives verbal encouragement to the learner. The pupil's record of performance is placed on the bulletin board along with the records of the remainder of the class, or by the teacher's remarks the learner knows when performance is unsatisfactory. All of these techniques are utilized in a certain way and sequence, certain verbal emphases are given, and demonstrations are made in specifically applicable ways.

One teacher may use many techniques because he tries to help each pupil learn as easily and rapidly as is possible for him. The teacher also desires to secure and maintain the interest and attention of each learner. Within a given class, many attitudes, temperaments, intelligences, special interests, vital needs, biological inheritances, and social backgrounds are represented by the various class members. Various techniques are necessary to "match," to "dovetail into," to adjust

to these differences. As the class period progresses, different activities are presented. Few activities call for identical techniques of instruction.

The techniques used by a teacher therefore are varied, specific, variable, and adjustable, according to the rapidly changing situations which occur during a class period. The techniques employed by one teacher may be (and usually are) different from those used by any other teacher. Teachers themselves vary in personality, temperament, attitudes, intelligence, and understanding. The specific techniques that prove to be effective for one teacher in a given situation may be most ineffectual for another teacher in a similar situation.

Even this brief discussion of teaching techniques, together with the recognition of the several other vital aspects of teaching, show that teaching is complicated and difficult.

QUESTION

What is the difference between teaching and teaching techniques?

TEACHING TECHNIQUES AND CONTENT ARE INSEPARABLE

Purposes change techniques. The beginning teacher particularly, like the novice coach, is apt to attempt to use similar techniques of teaching, regardless of the type of program or the activity. However, a change in the type of activity indicates a change in the techniques of instruction. For example, the techniques used in teaching squad movements and marching are not the same as those used in teaching volleyball. The point is not only that these activities are different but also that their *purposes* are different. The *atmosphere* which the teacher wishes to create in the former is dissimilar to the atmosphere he wishes to create in the latter type of activity. The kind and degree of mental attitude, initiative, self-responsibility, and sociability which the teacher tries to develop in pupils varies considerably between these two types of activities.

Content of activities differs. In addition, most activities vary in such matters as their intensity, complexity, numbers of participants, facilities, equipment, rules, necessary physical conditioning, necessary skills, plays, systems, and strategy. The wise coach does not teach football and basketball in the same manner. Why? Because the "mental-set" he tries to secure in the players in each case is different; because the degree of relaxation he tries to secure in the players in each case is different; because successful performance in football demands certain qualities not desired in basketball and *vice versa.* Even within one sport, techniques of teaching must vary from year to year because of rule changes, the improvement of plays and strategy, and the changes in the personnel of the team.

Consider the change in the *mental content* of many sports today as compared with twenty years ago. Change in the number of plays and the variety of attack and defense are sufficient to indicate that the coach today must use different techniques of instruction if his players are to master the new content.

We have purposely selected this example from the field of athletics. The rules of many athletic sports vary from year to year. There are many reasons for rule changes, but at any rate the trend seems to be toward more highly developed skill, more cleverness, more emphasis upon individual adaptability and responsibility. Is this not suggestive to the physical educator? The coach changes his techniques of coaching to meet these new demands upon the player.

Techniques fit content. Fitting techniques of teaching to the activity not only makes for good teaching but *makes* the activity. Not long ago, a teacher was observed teaching one-wall handball to two pupils, both beginners. He occasionally barked out brief orders like "Back!" "Up!" "Kill it!" until both beginners demonstrated fundamental errors of performance and judgment. The game was stopped; he briefly but

clearly demonstrated and explained their errors, showed them why they were errors, demonstrated the correct skills and had the pupils try the new way and continue with the game. Not more than one minute was used in this demonstration-explanation process.

After about six minutes, he turned his attention to a group playing basketball, most of whom were novices. He watched the game for a moment or two. He called to one of the three pupils who were practicing various basketball skills along the side lines and told the boy to go into the game as a substitute for Jim. The latter left the game and approached the teacher, who immediately asked him with what skill he was having the most difficulty. "Shooting," was the boy's reply. The two walked to a corner of the gymnasium toward an extra goal. The teacher not only went through the demonstrations of the wrong and right ways of holding the ball, shooting, and follow-up, but showed and explained the necessity for calmness and relaxation while shooting. Immediately thereafter, the teacher was again watching the game and soon made another substitution, with the resulting individual instruction, followed by pupil practice on a certain fundamental. Only once was the entire game stopped, and then but for a minute to tell and show both teams the fallacy of "bunching" defensively and offensively.

Ten or eleven minutes of the teacher's time was thus devoted to the group playing basketball. The teacher then moved on to watch a game of volleyball. Almost at once he called, "Tom." As the boy glanced at him, the teacher made a two-handed "boosting" movement, such as is considered correct in hitting a ball below the waist in volleyball. A minute or two later he called another boy's name and gestured to him to keep in his own territory. And so he spent five minutes with this group, teaching them without stopping the game or without making substitutions.

This teacher was not unusual in training or experience but

demonstrated some excellent teaching. It was obvious that the boys respected and liked him. Part of this cooperative attitude undoubtedly was due to the fact that he adopted techniques of instruction to fit the activity as well as the individuals. For the most part, the pupils spent the period in activity, and at the same time they received *necessary* instruction. On the other hand, the teacher did not give too much instruction. Most novices in flying and in automobile driving are guilty of overcontrolling. Novices in teaching are often guilty of overteaching.

Different content in one activity. The content of one activity may necessitate emphasis upon the acquirement of skills or strength, the development of such psychological factors as emotional control or such social factors as team play—that is, teaching techniques may change while one activity is being taught. As the selected content of an activity varies, so do the techniques of teaching change. In golf, quite obviously, a teacher would not use the same techniques in teaching sportsmanship as he would in teaching a pupil how to putt.

We have seen, therefore, that, regardless of the other major factors that make up teaching, activities and teaching techniques are inseparable. They are so closely related that, as the content of physical education or of an activity varies, so will the techniques of teaching change. The point might be mentioned again, that two teachers may use different techniques on the same activity, and both may be right and equally successful. We repeat for the sake of emphasis that a teacher may use different techniques teaching the same activity if different pupils are involved; a teacher may use different techniques instructing the same activity to the same pupils as he emphasizes different parts of the content of the activity.

QUESTION

From your experience or observation, give a concrete illustration of the principle: "Techniques of instruction change with changed content."

THE FORCE OF ENVIRONMENT UPON TEACHING TECHNIQUES

Environment, an ever-present force. The child, as we find him in the schools, is the result of the effects of his environment upon him, plus his inherited characteristics, plus what he does with these two factors. This statement means that, beginning with birth and before, many environmental forces unite to modify his biological inheritance. These environmental influences include forces in the physical world about him, such as climate, air, light, and topography. Environment also includes people, what is "taken in" by the senses, and such a factor as food. Sherman and other leaders in the science of nutrition are lending credence to that old saying, "Tell me what you eat and I'll tell you what you are." The socio-economic influences upon the individual are also potent in helping make an individual what he is.

These many environmental influences actually change the child's physical make-up, and Freeman has shown that they affect his intelligence also. The school should form one of the strongest of these environmental forces playing upon the child. It might be pointed out that the school environment could well be made a much more vital and permanent influence upon the pupil if it would eliminate some of its traditions which make it appear rather anemic and fiberless to the modern pupil.

Environment is a power in the selection and use of teaching techniques by the instructor. Let us be more concrete. Through what avenues does environment reach the child so as to work upon him for better or for worse?

The pupil absorbs his environment. The pupil must be viewed as an absorbing organism as well as a reacting one. Within the limits of his basic inherited equipment, the pupil reacts in terms of how he has been taught to react to the stimuli received from his environment. This "drinking in" of thousands of stimuli of many different kinds sets the stage for

what the pupil is, does, and thinks (again disregarding his inheritance). Looking at this process from a different viewpoint, we see the environment throwing out *cues*, absorbed by one or more of the pupil's receiving mechanisms (senses). These cues act as *suggestors* of behavior. These in turn help suggest attitudes and behavior and sometimes profoundly stimulate the emotions.

Education and environment. Such facts as these are not newly discovered. The Church for centuries has set up an environment conducive to quiet thought, peacefulness, a feeling of humility. On the other hand, the religious meetings of certain tribes resemble a war dance. Why? Because the emotions, attitudes, and behavior desired are fanatical ecstasy, emotional energy, and powerful desires. Obviously, then, cues operate as suggestors to the individual because he has been *conditioned* to react in a given way.

Some gymnasiums, physical education classes, and the teachers responsible for them suggest to pupils little else but disorganization and confusion. Disorder, dirt, and lack of repair in the gymnasium; lack of preparation for and organization of the classes; a slovenly manner of speech, disorderly dress, and a lack of poise on the part of the teacher are a few of the negative environmental cues. What emotions, attitudes, and behavior do these suggest to the pupil? This feeling depends on how he has been conditioned at home, school, and elsewhere, but particularly at school. Most schools and study halls suggest to the pupil work, study, and emotional control—at least we pretend or hope they do. If the homeroom also suggests these attitudes and this type of behavior, are not the pupils apt to create bedlam in the type of physical education environment described above?

Environmental cues to *physical activity* are found in: an open space; areas marked out for games; equipment in sight; cool air; light; the teacher dressed for activity; and the teacher who is visibly prepared and eager to "get started."

The pupils have been conditioned to this atmosphere of readiness and preparedness, to these cues that mean physical activity.

It is interesting to observe how sensitive children are to a change in the environment. Bring in a substitute teacher unknown to them, and their resulting reactions are unpredictable. The pupils do not act like the same pupils. Their attitudes and behavior are different. Or, even making so slight a change as the teacher of physical education appearing before the class in street clothes changes the environment enough to force observable reactions in the pupils, if they have been accustomed to seeing him in a physical education costume.

If the environment is changed too drastically or abruptly, distracting stimuli make it extremely difficult to accomplish very much. Many a physical education teacher well remembers the effect upon his classes when the "social committee" for the "Soph Hop" decorated one portion of the gymnasium during the physical education class periods.

A classic example of the failure to recognize the influence of environmental cues is the case of the high school principal in a crowded building who conceived the idea of using the study hall for classroom purposes. The bleachers in the gymnasium were then turned into the study hall. We can *imagine* the results, but the teachers and pupils *experienced* the double-action results upon the physical education classes and upon those who were supposed to be studying. Of course, if the pressure by the teachers was strong and prolonged enough, both groups would gradually tend toward carrying on the activities upon which they were supposed to be concentrating. It seems reasonable to estimate that such a task would demand strong teachers and months of "re-education." Environment, by means of cues, even the intangible ones which we call "atmosphere," therefore suggests to pupils, who have been so conditioned, certain emotions, attitudes, and types of behavior.

The teacher and environment. The teacher must create a type of environment in which the cues, atmosphere, and stimuli are favorable to learning. Techniques of instruction are selected by the teacher in terms of the whole environment, and the pupil is a part of that environment. In fact, the pupil and teacher both help make and are parts of the environment. But the teacher has a far greater opportunity and responsibility in controlling it. It therefore becomes the task of the teacher not only to manipulate the environment to facilitate learning but also to guide the pupil so that he in turn assists in creating an environment favorable to his own learning and the learnings of others.

In some localities physical education is at such a low level that the environment provided for it is little less than disgraceful. The task of the teacher in such a situation is threefold: to be a better salesman of physical education than his predecessors and sell a better program, to do everything possible to make the environment acceptable, and to work intelligently for improved conditions.

QUESTION

What are the various cues in the environment that may influence your techniques of instruction?

TEACHING TECHNIQUES NOT STATIC

By this time it is clear that teaching techniques cannot be given one label or cannot be thought of as fitting into only one teaching situation. Techniques fluctuate in their value and effectiveness according to the teacher, the pupil, the activity, the environment, the objectives, and the principles of teaching. And, while some of the relationships between techniques and these other factors have been made, a few further points seem appropriate at this time.

Teachers differ in use of techniques. Teaching techniques are adaptable to the uses which the teacher wishes to make of them. One teacher may use the commonly known technique

called "demonstration" in an entirely different way and at different stages of the pupils' learning than another teacher. Teacher *A* may demonstrate several skills very slowly before the class has participated in the activity including these skills. Teacher *B* may have the squad leaders demonstrate the skills at normal speed, only after the class shows or feels a need for them. Teacher *C* may show a moving picture of some outstanding performer executing these skills. All of these are different adaptations of *demonstration.*

Techniques vary with ideas of learning. Teaching techniques also are adaptable to the different ideas of the ways pupils develop and "unfold." Some teachers believe that the best way to develop pupils is to let them participate ("we learn by doing") and teach each part of the activity in logical order. Other teachers will agree with this principle of "pupil-participation" but maintain that the activity-elements be learned in order of difficulty. Still other teachers hold that the activity be taught as a whole ("let them learn to play the game by playing the game") and thus keep the pupils' interest at a high level. Regardless of the various claims for the superiority of each of these different ideas, teaching techniques should be adapted to fit our best knowledge of the ways children learn best.

Techniques vary with teacher emphasis. Techniques of instruction are adaptable also to the points of emphasis selected by different teachers. Teacher *X* may emphatically stress the accomplishment of the major objectives of physical education, while the activities are actually regarded as incidental. Teacher *Y* selects skill-execution as his point of emphasis, while the activities themselves and their corresponding objectives receive little attention. Teacher *Z* emphasizes the enjoyment and pleasure—the recreational—aspects of activities. To him all else is incidental. Most teachers use all of these and other points of emphasis shifting from one to the other as the occasion and their best judgment indicate.

In each case, however, teaching techniques are adapted to the emphases which the teacher believes should be made.

Techniques and changes in pupils. While we have been discussing the various aspects of teaching, there has been no intention to glorify it *per se.* The teacher's chief concern actually centers upon such questions as: Is the pupil getting it? Is he understanding it? Is he assimilating it? Is he developing? In the teacher's enthusiastic concentration upon answering these questions in the affirmative, he may find himself using techniques of instruction he never heard of, and using them effectively. Regardless of the "name" of a specific technique of instruction, it is valueless if it does not produce desirable changes in the pupil. Dewey says that no teaching has taken place unless the pupil has learned. Learning means that changes have taken place. Learning means changes in such phenomena as the pupil's nervous system, body build, his appreciations, emotional control, attitudes, and outlook. It is readily admitted that all changes occurring within the child are not due to school education or physical education. In fact, many *desirable* changes are correctly attributed to other agencies, forces, and conditions. But this does not free the school from its responsibility.

It is similarly true that some undesirable changes in the child are made by the school and these outside agencies. When such maleducations are discovered, it is the function of the teacher so to control the experiences of the child that desirable changes within the pupil tend to eradicate, change, or supplant the undesirable changes. This control refers, of course, not only to skills and habits but to attitudes, emotions, and social conduct as well.

Teaching sometimes includes not only what the teacher does but what he fails to do. If there are certain desirable skills or other worthy outcomes of a given activity which are essential but which are not learned by the pupils because the teacher failed to teach them, we are forced to assume

faulty teaching. Teaching includes seeing and grasping the opportunity to teach all that should be taught.

Finally, teaching begins with the pupil: what he knows, what he is, what he can do, in what he is interested; and good teaching leads him in the direction in which the teacher wants him to go, whether it be in personality, citizenship, or roller skating.

QUESTION

What are the various forces that make techniques of instruction fluctuate?

"BEST" TECHNIQUES OF INSTRUCTION

The old vs. the new. One sometimes hears prospective or young teachers say: "I didn't get a thing out of that 'methods' course. All he gave us was generalities. What I want to know is: 'What are the best ways to teach the various activities?' "

As intimated previously, not even a teacher-trainer, child-psychologist, or experienced teacher can provide a beginning teacher with the "correct" techniques to meet the thousands of teaching situations. These specialists do not know *your* pupils, *your* town, the school environment of *your* school, or *you* as a teacher of these pupils, and they do not know how the pupils will act under these conditions. The specialists can only make suggestions in terms of their own experiences, the training which they received, the knowledges they have acquired, and the philosophy which they have constructed for themselves.

The "one technique" idea. Another interpretation of the best technique concept is reflected in the student-practice of labeling certain good teachers with such a phrase as: "He's a driver and doesn't stand for any foolishness." The driver type of physical education teacher, if he is successful, "drives" only certain individuals, "drives" only at certain times, and

"drives" only while teaching certain types of activities. He does not use driving as the "best" teaching technique. Rather, he uses it as one of his various means of accelerating pupil learning.

Imitating others. A word should be said at this time regarding the practice of imitating the techniques of successful teachers. These techniques are sometimes ranked as best by prospective teachers. Excellent teachers usually discover their own best techniques; that is, those that fit their respective personalities best in given situations. They "hit" upon these techniques after considering the other limiting factors mentioned above, such as the pupils, environment, activity, objectives, and so forth. Many a young teacher is apparently a failure merely because of this imitation of a respected former teacher, until an understanding supervisor or principal comes to his assistance. The teacher then begins to discover his own strengths and abilities and adopts techniques that synchronize with them.

What are best techniques? Undoubtedly there are certain techniques that on the average have proved better than others. The young teacher, therefore, is advised by the more experienced teacher or his major professor to avoid those techniques which, on the average, may get him into trouble, produce results slowly, or produce fewer desired results. However, the trend today is away from labeling any teaching techniques as best. The modern emphasis is upon developing ingenuity, self-responsibility, and an understanding of the pupil. This assumes that the beginning teacher is fortified with principles of teaching, with some experience in college classes where he wrestles with the teaching problems that he is likely to encounter, and with the suggestions and experiences of successful teachers as to how these and other practical problems were solved by them. The beginning teacher will also be told that certain techniques have proved to be best *on the average.* These he will have to try out and experiment with.

No one can tell him the results that he will secure. He certainly will not continue to use them if they prove to be not best for him. Finally, he should make certain that he knows how to use the techniques, when to use them, where to use them, and upon whom to use them.

QUESTIONS

1. What are the objections to the former idea that there were some best teaching techniques to be used by all teachers in certain teaching situations?
2. What are some examples of techniques which you formerly believed were "best"?

TEACHING AND PRINCIPLES

A number of years ago, the prevailing idea of preparing teachers was to send them out "armed" with literally hundreds of specific techniques. The attempt was made to anticipate every situation and to have an indicated technique to "handle" it. This former idea failed to take into account several facts.

In the *first* place, no two pupils, grades, or classes are identical. *Second,* no two schools with their respective administrative policies and practices, personnel, and traditions are the same. *Third,* no two communities with their respective racial backgrounds, socio-economic levels, educations, and attitudes toward physical education and teachers, are alike. *Fourth,* no two teachers are identical in personality, speech, skill, attitudes toward or understanding of children. *Fifth,* no two teaching environments are the same. In fact, the "atmosphere" is apt to change from day to day even with the same teacher and class in the same gymnasium. *Sixth,* no two immediate teaching situations are identical. The previous five points show why this last is true.

The nature of principles of teaching. It is clear therefore that the young teacher armed confidently with what he thought were sure-fire techniques found that many of them

misfired or were "duds." In spite of the common experience of teachers prepared in this manner, some prospective teachers earnestly desire, and almost demand, a panacean answer to each detailed teaching problem. The fact is that it is impossible for anyone to provide them with such information. It is possible to provide guides toward successful teaching. These guides are called "principles of teaching."

These principles have arisen from several sources. The experiences of successful teachers, experimentation in teaching, psychological theories and laws, and facts from anatomy and physiology are examples. The facts, observations, and experiences from these sources form a mass of information, evidence, or data which indicate certain conclusions. The drawing of these conclusions is commonly called "generalization." Principles of teaching, therefore, are generalizations based upon the facts and near-facts related to teaching. We are in a position to generalize when certain uniformities are found in the many facts gathered from such sources as are listed above.

Examples of principles related to teaching.[17] A few examples will further clarify the meaning of principles of teaching. Freeman summarized the evidence with reference to penmanship and suggested several rather definite principles of teaching writing. One of these principles is: "The forearm should form a right angle with the base line of the letters." Usually principles are presented in more general terms. Barr has constructed some principles related to making provisions in one's teaching for individual differences in pupils. One of these principles is: "That method of providing for individual differences is best which guarantees that each pupil shall work up to capacity." Barr, Jayne, and Matthews worked out some principles regarding "the selection and organization of learning experiences." One of these is:

[17] Barr, A. S., Burton, W. H., and Brueckner, L. T., *Supervision*, pages 425–432. New York: D. Appleton-Century Company, 1938.

"The activities should possess interest value for the pupil and lead to new and more mature interests." Another is: "In general, learning should progress from wholes to parts and parts to wholes in this order; parts should always be seen in relationship to wholes." Symonds, in a list of principles related to learning, presents this one among others: "The rate at which the conditioned reflex becomes established is correlated with the strength of the conditioned reflex."

A teaching principle more obviously applicable to physical education is: "Physical education should be so taught that pupils consider it a part of living rather than a special set of experiences." Another example: "After the onset of puberty particularly, girls should be taught by women and boys by men instructors of physical education." A third example: "Physical education should be conducted so that vigorous activity should be preceded by a 'warming up' period and followed by a 'cooling down' period." An example of a principle which has *implications* for teaching and coaching is: "Neuro-muscular control and coordination decrease as fatigue increases."

Teaching principles not permanent. The foregoing principles are not final. Few, if any, principles of teaching will hold for all time. The reason for this is that many of them are based upon psychology—a new science. As new facts are established, principles change. On the other hand, principles of teaching arising from such fundamental sciences as anatomy and physiology can be regarded as more stable. Such principles appear in the last two examples in the paragraph above.

Need for more principles of teaching.[18] Physical education is badly in need of principles of teaching. Without them, teaching is largely a process of "trial and error." Lacking teaching principles, the teacher gropes blindly for

[18] Barr, A. S., Burton, W. H., and Brueckner, L. T., *Supervision*, pages 32–33. New York: D. Appleton-Century Company, 1938.

"proper" techniques. A given principle of teaching brings together the several techniques which apply to the case. The teacher who uses teaching principles is not forced to ferret through the whole gamut of techniques looking for the right one. His search is centralized to a given set of techniques related to a given principle.

Take, for instance, the futility of the techniques of disgust, blaming players, emotional outbursts, and other indications of frustration used by some coaches who do not know that "neuro-muscular control and coordination decrease as fatigue increases." On the other hand, the informed coach provides rest periods and plans substitutions. He is alert to the loss of coordination on the part of participants. He knows that training periods tend to postpone the fatigue that decreases coordination. And, using other principles related to individual differences, he estimates and plans for the maximum skill possible on the part of the team throughout a game.

Wise coaches and teachers are constantly on the lookout for new principles because they tend to eliminate needless blunders, serious mistakes, slow learning, and poor attitudes.

Teaching principles and techniques.[19] The point of emphasis is that principles indicate the set of techniques to be used. They guide and control performance of techniques. Obviously, then, both principles and techniques are essential. Principles guide the way; techniques are the specific ways of getting there.

Principles indicate, among other things, that at the beginning of a physical education class the teacher should have the attention of the group before talking; he should hold their attention and interest; he should enable them to participate as soon as possible (we learn by doing, not by listening to someone tell us what we are to do); the lesson should have some

[19] Barr, A. S., Burton, W. H., and Brueckner, L. T., *Supervision*, pages 33, 34. New York: D. Appleton-Century Company, 1938.

"tie-in" with a previous lesson; there should be a "warming-up" period.

The specific ways the teacher has of gaining attention, holding interest, and so on, vary from day to day, from teacher to teacher, from class to class, from one school to another, from one community to another.

Teaching principles, aim, and objectives. The teacher strives toward the aim of physical education by guiding, leading, and stimulating pupils to accomplish the objectives of physical education. This guiding-leading-stimulating process is accomplished directly by means of teaching techniques. The techniques selected by the teacher are governed by principles of teaching. The following analogy may further illustrate the relationship. Let us assume that "the good life" is the *aim* of a number of parents for their children. *Objectives* leading toward "the good life" relate to such matters as social responsibility, emotional maturity, health, character, and recreation. Each of these parents will use his own ways or *techniques* of trying to get his offspring to attain these objectives. However, there are certain principles governing the action of parents if they successfully lead and guide their children toward the aim and objectives selected—that is, they all will have to practice certain principles. These principles, of course, are similar to those used by any teacher. By way of illustration, they will have to consider individual differences among the members of their respective families. It seems apparent that one reason the second child in a family is sometimes not so well reared as the first child is because the parents attempt to use the same techniques on both—that is, they are not aware of or ignore the principles regarding individual differences.

VALUE INFLUENCES TEACHING

Valuableness, an individual matter. It will be recalled that the philosophical approach to teaching included a con-

sideration of the value of the activities being selected. This value is of necessity subjective judgment of worth—often *degree of worth* in comparison with other things, experiences, or hoped-for outcomes. Because there are so many activities in physical education that might be taught, the teacher often is confused as to just which ones to teach. It seems the better part of wisdom to select those of most value to the individual and to society. But all individuals are not the same. What is most valuable to some is not particularly valuable to others.

While in a democracy we consider the greatest good for the greatest number, we also take into consideration the welfare of the individual. It seems reasonable to take the position that the physical education activities selected for a given group should be those most valuable to the greatest number of pupils. There must also be special activities for the physically superior, for the physically inferior, for those without and with physical defects, and for those with other special needs and interests. Physical education should be made to fit the individual. The teacher of physical education no longer teaches teacher-selected activities to pupils, *regardless.* As the words in the sentence indicate, there is too much emphasis upon the teacher and not enough upon the pupil.

The value of objectives. It is also necessary to determine what objectives of a given activity are most worth while to the pupil at a given time and place. In a game of volleyball, is organic vigor to receive chief emphasis, or is the emphasis to be placed on skill? Is enjoyment or meticulous obedience to rules the point of emphasis? Shall we make it the socio-moral attributes such as good sportsmanship, or winning the game? The teacher also must decide which skills of volleyball are most worth while for learning at a particular time. Shall it be spiking, passing, or serving? When an answer is given, we must reconsider whether we have in mind the individual or the group. And, after this question is answered, we must face the question of whether we were thinking of

worth-whileness to the child now, next year, or in postschool years?

Teaching techniques and the teacher's idea of value. The teacher's techniques of teaching volleyball will vary according to his ideas of what is most valuable. If he conceives that winning the game, for example, is most valuable, he will use certain techniques. If he considers the acquirements of socio-moral attributes most worth while, obviously he will use other techniques. Techniques of teaching also vary if the teacher considers brilliance of individual performance more valuable than the enjoyment that the group gains from volleyball.

The point also is emphasized that, at the outset, volleyball was selected because it seemed to be most valuable for the greatest number of these pupils at the time. The responsibility thus placed upon the teacher's vision and judgment is no small matter. In addition, he may have to discard some of his own personal preferences and biases pertaining to activities. More and more we are considering the interests and values of the pupils. Both of these are, of course, products of education. The task of the teacher in developing new interests and guiding the pupil to appreciate new or different values is clear. This deepening, broadening, and enriching experience of the child is a prime factor in making physical education *educational.*

The teacher also must check each other phase of teaching—the environment, the pupil, the activity, the objectives to be accomplished, and the testing procedures. These must be so controlled that the sum total of the resulting experience for the pupil is of most value to him.

A more obvious relationship between teaching and value is seen in the answer to this question: "In what ways can I make volleyball most valuable to these pupils?" In answering such a question, the teacher takes the first step toward selecting techniques of teaching that promise to make an ac-

tivity of optimum value to pupils. Previously planned techniques may be discarded or eliminated when a teacher selects techniques in terms of "most value."

In making an activity "most valuable," the teacher may decide that for this group there should be fewer drills on skills and more participation in the game itself. Perhaps the objectives first selected need to be redefined, or the immediate environment may need to be changed. Perhaps the equipment needs to be changed so that it better fits the age and development of the particular group being taught. The game might be played out-of-doors instead of indoors on warm, clear days, even though it is an indoor activity; or the game might be eliminated altogether because of the size of the class for the amount of space. The number of pupils on each side may be changed so that greater or less activity is demanded of each player; or, perhaps the playing rules need to be modified for this particular group of pupils.

Teachers are exercising greater initiative and ingenuity in modifying the various phases of teaching in order to make physical education most valuable to pupils. They are breaking away from inflexible procedures and set ideas. They are exercising courage and imagination in making changes in the various aspects of teaching so that the pupils benefit. Pedagogy is being directed toward benefits for the pupil instead of toward the niceties of teaching.

SAMPLE TEST ITEMS

True-False

1. The art of teaching is related to a teacher's inherited characteristics.

2. Teaching can become scientific in the same sense that the chemist is scientific.

3. It is easier for the beginning teacher to rely upon recommended techniques of teaching than upon recommended principles of teaching.

4. The philosophical approach to teaching is certain to seem impractical to most prospective teachers.

5. The sociological approach to teaching is of recognized value and is related to a nation's basic political beliefs.

6. Equal emphasis always is given to the philosophical, scientific, psychological, and sociological approaches to good teaching.

7. The teaching environment includes both the teacher and the pupil.

8. The aim of physical education of a people is related to its social and political beliefs.

9. The aim of physical education in the United States has never changed and probably never will change.

10. There is a fundamental similarity in the opinions of most leaders as to the aim of physical education.

11. An aim is a general and remote end and is consequently unrelated to everyday teaching.

12. Objectives of physical education invariably lead to the aim of physical education.

13. Leaders in physical education are agreed in their statements of the specific attainable ends of physical education.

14. A given activity, to be well taught, demands the use of certain specific techniques of teaching.

15. Good teachers are agreed as to the sequences of skills in learning a given activity.

16. Recognition of the full import of "individual differences" is related to one's belief in the "teaching technique" approach to teaching.

17. Principles of teaching are valuable because they represent the beliefs of college professors.

18. Principles of teaching, if intelligently applied, are apt to help the teacher avoid serious blunders.

19. The teacher is thoroughly qualified to determine those activities of most value to all members of a class.

20. The attainment of a given objective is equally valuable to all class members at a given time.

21. A teacher's system of values regarding an activity is important but unrelated to his teaching.

22. Increased teaching ingenuity often results if a teacher strives to make physical education as valuable as possible to a pupil and to the class.

23. While the principles of teaching physical education are fairly stable, the techniques of teaching change to fit the activity.

24. All of the content of a given activity is similar.

25. Two teachers could use different sets of techniques in teaching the same activity to a given group and both be judged as excellent teachers.

Multiple Choice

1. The teaching environment is a very important factor in the learning of the child because:
   a. It includes tangible items such as equipment and people.
   b. It includes visible conditions such as ventilation and heat.
   c. It throws off cues to child behavior.
   d. It is modifiable.
   e. It affects the child's inherited characteristics.
2. A child reacts to his environment in certain ways because:
   a. He has inherited tendencies to react in these ways.
   b. He has been conditioned to react in given ways.
   c. He is directly taught to react in certain ways.
   d. His judgment indicates that these are the best ways to react.
   e. His reason indicates that these are the only ways to react.
3. Equally successful teachers may use different techniques in teaching a given activity to a given group of children because:
   a. They recognize their own special abilities in using certain techniques.
   b. Their professional training may vary as to how best learning is best accomplished.
   c. Their beliefs as to the fundamental purpose of the activity may differ.
   d. They may differ in their concepts of their full responsibility as teachers.
   e. There is no way to tell a poor technique from a good one.
4. The "best techniques" belief is invalid because:
   a. No teacher wants to admit the superiority of another teacher.
   b. There are no criteria of good teaching.
   c. Teachers differ in their effectiveness in using techniques in varying, as well as in similar, situations.
   d. Prospective teachers tend to believe that there are "sure-fire" techniques for any situation.
   e. Modern educational experts state that this is true.

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4.

What Are the Purposes of Teaching?

"There is no road to success but through a clear strong purpose."—MUNGER

Some criticisms of the present use of objectives. The previous chapter presented several lists of the major objectives of physical education. However, one of the keen criticisms leveled against lists of major objectives, specific objectives, and more specific objectives is that they are conceived, initiated, and followed up by adults.

The pupils' own feelings of values important. The *first* criticism is that not enough consideration is given by teachers to their pupils' understanding of these "adult" purposes of physical education; not enough consideration is given to their pupils' own purposes of physical education; not enough consideration is given to their pupils' ideas of what is valuable in physical education, in this lesson, in this activity. "Attention has been devoted so completely to getting children to engage in certain specific activities . . . that little attention has been given to what the children were endeavoring to achieve by means of the activities. . . ."[1] It is a well-known psychological fact that children learn more slowly (if

[1] Caswell, H. L., and Campbell, D. S., *Curriculum Development*, page 197. New York: American Book Company, 1935.

See also Educational Policies Commission, *The Purposes of Education in American Democracy*, pages 150, 151. Washington: National Education Association, 1938.

at all) and forget more quickly those activities in which they see little or no value. The point is not that the activities and the objectives selected by the teacher are not worth while. Rather, the point is that we have assumed that if pupils do what we tell them to do they will attain the objectives set up. Sometimes they do. However, too often the process of learning activities and accomplishing objectives is greatly retarded by the teacher's failure to help the pupils understand and recognize the purposes and values of the activities.

The proposal that the teacher and pupils work cooperatively in selecting activities and deciding upon objectives does not infer that pupils are well prepared for these tasks. The cooperative plan provides excellent opportunities for the teacher to *guide* the children in understanding, in setting up new values, in broadening their judgments.

One cannot help questioning the success of the physical-education teacher whose pupils fail to participate in physical education activities in out-of-school days and years if opportunities present themselves for such play and recreation.

Major objectives not result of adding minor objectives. A *second* criticism [2] is the existence of the present false assumption that when a pupil attains the "more specific objectives" he will have attained the "specific objectives" to which they lead; that when he attains the "specific objectives" he will have attained the "major objective" to which they lead; and so on. It is highly questionable if the sequential "stairsteps" sketched on page 74 in the previous chapter present the true picture. Again, the danger of trying to simplify matters too much is illustrated.

For instance, let us suppose that a major objective of a teacher of physical education is for the pupils to learn basketball. It is known that to play basketball one must be able to pass, catch, dribble, pivot, and perform other fundamentals.

[2] Caswell, H. L., and Campbell, D. S., *Curriculum Development*, pages 118, 119. New York: American Book Company, 1935.

These could then be considered specific objectives. And, to be able to perform each of these fundamentals one must learn to perform finer movements involving fingers, hands, arms, and so on. Yet every teacher and coach knows that a pupil or player could learn each movement and each fundamental, step by step, and still not be able to play basketball. The reason for this is that the step-by-step acquirement of objectives does not provide for the *game* situation. It is impossible to tell a player beforehand precisely what skill or fundamental will follow another in game situations. Activities like basketball demand the proper sequence of skills and fundamentals at the proper split-second in the proper situation, quite as much as performing the skill itself.

Stereotyped steps through established objectives stymie progress. A *third* criticism [3] of the present uses of objectives by teachers is related to the one just discussed. The idea that pupils can attain a major objective by going through, step by step, objectives of "lesser rank" tends to bar the introduction of the new. That is, if a teacher thinks that the way to learn basketball is to go through certain steps, where is there a place for a player to learn new fundamentals that continually arise? If the new skill *must* be learned, the whole step-by-step process has to be changed. And, as teachers and coaches are trying more and more to teach something besides skills (for example, fair play, self-control, responsibility), they encounter difficulty because these new elements do not fit into the step-by-step plan.

Furthermore, new ways of organizing an activity for teaching tend to be barred from consideration. The teacher who thinks basketball is learned by the pupil's acquiring a series of sequential objectives organizes the activity accordingly. Heated discussions result if it is suggested that these steps are unnecessary or improperly arranged. Another good example

[3] Caswell, H. L., and Campbell, D. S., *Curriculum Development*, pages 117, 118. New York: American Book Company, 1935.

to illustrate this point is found in the case of swimming. There are teachers of this activity who stoutly maintain swimming must be organized so that the beginner: (1) learns to breathe, (2) learns to kick, and (3) learns to stroke, in this order. Still other teachers disagree vigorously with this sequence. In either case, after these steps are learned, the beginner must still learn to *swim.* And whether or not he will like to swim, be able to swim in situations differing from those prevailing when he learned to swim, wish to continue to develop greater ability in swimming, are unanswered questions.

During World War II it was necessary to teach millions of men to swim in a few hours during recruit training. The orthodoxy of the step-by-step method was impractical. Instructors abandoned the pedagogical niceties and taught men to swim by having them *swim.* Some instructors taught hundreds of men to swim in one lesson by using novel techniques. True, there was an urgent demand for results in a hurry and there was no consideration of other objectives. Yet thousands of men learned to swim who had failed previously through the step-by-step method.

Analysis of objectives into detailed specifics may obscure major objective. A *fourth* criticism [4] of the detailed breaking-down of objectives into more detailed objectives has been recognized by teachers for years. It is possible to analyze the objectives of a given activity or physical education class into such detail that literally hundreds of small objectives result. The multiplicity of such a mass of details staggers the beginning teacher and confuses or discourages the more experienced teacher.

The beginning teacher is not to conclude from these criticisms that there is no need to attempt to analyze or break down major objectives. Just the moment we attempt to teach

[4] Caswell, H. L., and Campbell, D. S., *Curriculum Development,* pages 119, 120. New York: American Book Company, 1935.

so that these more general purposes are accomplished, we are forced to analyze them in order to arrive at concrete acquirements. However, these criticisms point out weaknesses and mistakes to avoid.

Newer purposes of education. For the past twenty years the "seven cardinal principles of education" [5] have profoundly influenced and guided educational thought. They were listed as:

1. Health.
2. Fundamental Processes.
3. Vocation.
4. Citizenship.
5. Worthy Home Membership.
6. Worthy Use of Leisure.
7. Ethical Character.

Leaders in and teachers of physical education have cooperated in making physical education contribute to these major objectives. The new list of purposes presented by the Educational Policies Commission represents a re-interpretation of the purposes of education in American democracy. These purposes with their analyses are presented here for two reasons. *First,* this presentation represents the newer thought in how objectives should be constructed. For example, it will be noted that the four major objectives are broken down, as is done in the step-by-step process. The difference is that the detailed analysis in the newer plan is not carried to such an extreme as in the older plan. Also, the specific objectives under each of the four major objectives are clarified by descriptive statements. *Second,* this plan provides and encourages freedom, initiative, imagination, and ingenuity on the part of the teacher.

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[5] U. S. Department of the Interior, Bureau of Education, *Cardinal Principles of Secondary Education,* Bulletin, 1918, No. 35. Washington, D. C.: Government Printing Office, 1918.

The four major objectives with their analyses follow. It is earnestly requested that the reader secure a copy of the booklet which presents an interesting discussion of each phase of these purposes.[6]

I. THE OBJECTIVES OF SELF-REALIZATION

The Inquiring Mind. The educated person has an appetite for learning.

Speech. The educated person can speak the mother tongue clearly.

Reading. The educated person reads the mother tongue efficiently.

Writing. The educated person writes the mother tongue effectively.

Number. The educated person solves his problems of counting and calculating.

Sight and Hearing. The educated person is skilled in listening and observing.

Health Knowledge. The educated person understands the basic facts concerning health and disease.

Health Habits. The educated person protects his own health and that of his dependents.

Public Health. The educated person works to improve the health of the community.

Recreation. The educated person is participant and spectator in many sports and other pastimes.

Intellectual Interests. The educated person has mental resources for the use of leisure.

Esthetic Interests. The educated person appreciates beauty.

Character. The educated person gives responsible direction to his own life.

II. THE OBJECTIVES OF HUMAN RELATIONSHIP

Respect for Humanity. The educated person puts human relationships first.

Friendships. The educated person enjoys a rich, sincere, and varied social life.

Cooperation. The educated person can work and play with others.

Courtesy. The educated person observes the amenities of social behavior.

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[6] Educational Policies Commission, *The Purposes of Education in American Democracy.* Washington, D. C.: National Education Association, 1938.

Appreciation of the Home. The educated person appreciates the family as a social institution.

Conservation of the Home. The educated person conserves family ideals.

Homemaking. The educated person is skilled in homemaking.

Democracy in the Home. The educated person maintains democratic family relationships.

III. THE OBJECTIVES OF ECONOMIC EFFICIENCY

Work. The educated producer knows the satisfaction of good workmanship.

Occupational Information. The educated producer understands the requirements and opportunities for various jobs.

Occupational Choice. The educated producer has *selected* his occupation.

Occupational Efficiency. The educated producer succeeds in his chosen vocation.

Occupational Adjustment. The educated producer maintains and improves his efficiency.

Occupational Appreciation. The educated producer appreciates the social value of his work.

Personal Economics. The educated consumer plans the economics of his own life.

Consumer Judgment. The educated consumer develops standards for guiding his expenditures.

Efficiency in Buying. The educated consumer is an informed and skillful buyer.

Consumer Protection. The educated consumer takes appropriate measures to safeguard his interests.

IV. THE OBJECTIVES OF CIVIC RESPONSIBILITY

Social Justice. The educated citizen is sensitive to the disparities of human circumstance.

Social Activity. The educated citizen acts to correct unsatisfactory conditions.

Social Understanding. The educated citizen seeks to understand social structures and social processes.

Critical Judgment. The educated citizen has defenses against propaganda.

Tolerance. The educated citizen respects honest differences of opinion.

Conservation. The educated citizen has a regard for the nation's resources.

Social Applications of Science. The educated citizen measures scientific advance by its contribution to the general welfare.

World Citizenship. The educated citizen is a cooperating member of the world community.

Law Observance. The educated citizen respects the law.

Economic Literacy. The educated citizen is economically literate.

Political Citizenship. The educated citizen accepts his civic duties.

Devotion to Democracy. The educated citizen acts upon an unswerving loyalty to democratic ideals.

Obviously physical education does not contribute to all of these major and minor objectives. Physical education is only one phase of education. The teacher of physical education will desire to teach so that physical education makes its rightful contribution to these educational purposes. This list of the major purposes of education may suggest the necessity for a re-interpretation of the major objectives of physical education in terms of the ever-deepening and ever-widening of our understanding of American democracy.

QUESTIONS

1. What common mistakes in the use of objectives in teaching should the teacher avoid?
2. In what ways do the major purposes of education of today differ from those of twenty years ago? What accounts for this change?

KINDS OF OBJECTIVES

Some confusion exists in a discussion of objectives unless we specify whether or not we mean educational objectives; administrative objectives; teachers' objectives; pupils' objectives; class, grade, or lesson objectives; and the objectives of an activity. Shall we clarify this situation? We have already discussed the newer educational objectives. Shall we consider some examples of administrative objectives?

Administrative objectives. Objectives set up for the ad-

ministration of the department represent the accomplishments which the department should strive to attain. What are some of these administrative objectives?

SOME MAJOR ADMINISTRATIVE OBJECTIVES

1. A progressive and modifiable course of study based on a sound and well understood philosophy.
2. An understanding by the staff of the philosophy of physical education with its major objectives; an interest in student progress toward these objectives, and evaluation of their progress.
3. Adequate facilities and equipment conducive to greatest achievement in the program.
4. Efficient administrative routines with delegation of authority and democratic procedures.
5. Efficient teaching and high morale through in-service training, adequate salaries, and proper recognition of good work.
6. Adequate breadth of program at all levels so that all students may progress.
7. Community interest, support, and enthusiasm for the program.

Teacher's objectives. Many of the teacher's objectives are similar to those of the pupil. The distinction between many teacher and pupil objectives is they are merely worded differently, because the teacher and pupil have different points of view. Teaching and learning are two different tasks. For example, a teacher's objective might be "to demonstrate volleyball so that the pupil will learn it more easily." Or it might be "to create an interest in hockey so that the pupil is eager to learn it." Or the teacher's objective might be "to teach badminton so that the pupil experiences a felt difficulty and is therefore anxious to learn." In the meantime, the pupil's objective might be merely "to learn ————," or "to have a good time with this new equipment," or "to get a 'workout.' "

For many pupil objectives there are corresponding teacher's objectives—worded differently, of course. Some teacher's objectives do not find their counterparts in the pupil's objectives. Here are a few: to prepare the gymnasium so that it

is in readiness for best teaching; to be prepared to demonstrate this new activity; to plan today's lesson for the ninth grade so that it is related to the pupil's former experiences and leads on to new or enriched experiences; to teach so that wanting to learn to swim becomes an objective of the student; or, to motivate the pupil to formulate his own objectives in his own way so that his efforts and attention are focused in the desired direction.

The pupil's objectives. In the previous paragraph the implication is that not all pupil objectives are paralleled by teacher's objectives. The teacher doubtless tries to have the pupils set up many objectives somewhat similar to those for which he wants the pupils to strive. In fact, if a teacher is unsuccessful in securing this type of cooperation and mutual understanding from the pupils, he has failed as a teacher. On the other hand, it is difficult to know what is in the minds of pupils.

Sometimes the objective selected by the pupil is not at all the one which the teacher has in mind, or that which he thinks the pupil has in mind. For that matter, even if the teacher is wise enough to set up pupil objectives with the active cooperation of the class, some *one* pupil may not "go along." It is possible for any individual to set up an undesirable objective instead of the agreed-upon desirable one.

For example, during a recent survey of a high school, the teacher and one squad in the class decided they would review for the survey experts several stunts on the mats. The teacher had in mind three objectives: (1) review; (2) showing the surveyors what this squad had learned in this type of activity; and (3) the development of organic vigor through the use of major muscles. The teacher told the squad that after this ten-minute review they would play volleyball. The squad, with but one exception, performed rather well. This one individual seemed to be having considerable difficulty performing the stunts. The teacher registered surprise and gave

the girl several trials on each stunt and much encouragement. The pupil, however, seemed unable to perform even one stunt successfully, although she seemed to be trying very hard. The curiosity of one of the surveyors was aroused. At the noon recess period she sought out this particular pupil. After several minutes of tactful conversation, she discovered that the pupil's objective was simply to waste as much time as she possibly could so that there would be less time for volleyball, a game she labeled as "terribly sissy." She hoped the teacher would keep her "trying" to do the stunts until the class period was over.

Teachers sometimes fail to gain the cooperation of pupils because they do not take the time and trouble to understand those whom they teach. If the teacher in the above illustration had understood the attitude of this particular pupil, it would have been possible to have secured different conduct on the pupil's part—that is, it is part of the teacher's responsibility to discover and sense attitudes and to take steps to modify them if necessary. For example, such steps as the following tend to modify negative attitudes toward an activity: disseminating information about the activity secured from sport pages, books, magazine articles, photographs, or letters that college men, businessmen, or possibly a sport hero of this particular pupil have written about the activity; making it possible for the student to see excellent players participate, or movies of good teams in action. Too much trouble? Perhaps. It depends upon whether a teacher considers his task one of developing games or developing pupils.

Objectives of the activity. The objectives of the activity are worded somewhat differently from those of the teacher for the pupil but, of course, relate to the pupil. The pupil's objective might be worded "to get strong arms," while the objective of the activity would be worded by the teacher "to develop organic vigor through vigorous activities, some of which develop strength in the arms." The pupil's objective

is in terms of what he wants to learn. The objectives of the activity are in terms of what it *is to do for* or *with* the pupil. Throughout this chapter, we are most concerned with the objectives that arise through teacher-pupil cooperation. The comprehension and adoption of desirable objectives by the pupils implies mature guidance and developmental teaching.

QUESTION

If someone presented an objective of physical education for your appraisal, you would first wish to know its classification. If the objective was well worded, could you tell whether it was an administrative, teacher, pupil, activity, class, or lesson objective?

Objectives of a class or lesson. It is clear that the teacher with pupil-cooperation must set up objectives for a given class, grade, or lesson. He uses objectives that contribute toward the desirable accomplishments he and the pupils have decided should be attained. In such cases, the teacher thinks of the group more than of the individual pupil. He tries to help as many as possible of a given class or grade to reach these certain objectives. In the case of lesson objectives, the teacher tries to get the majority of the pupils to accomplish the objectives set up for that single lesson.

In teaching tennis to a class of beginners, one of the specific objectives will be the backhand drive. The teacher hopes to have the pupils doing backhand stroking by the time the course is over. Even so the degree of efficiency of this stroking will vary among the individual class members. The teacher knows that the more specific objectives include: (1) a suitable hand-grip on the racket, (2) suitable backswing, (3) proper foot position so that back of stroking shoulder is toward the net on backswing, (4) watching the ball over that shoulder and until ball-contact with racket, (5) adequate knee-bend so that head of racket is not dropped below wrist level, (6) shift of weight from back to forward foot on the stroke, (7) full-arm forward swing through what is approxi-

mately a horizontal plane, (8) racket face in approximately a vertical plane as racket strokes ball, (9) meeting ball as it arrives even with foot nearest net, (10) follow-through.

Even finer breaking down of objectives might include minor adjustments for stroking the low-bouncing ball; for example, a slightly upward stroking and a turning of the racket on the stroke to give some top-spin. If necessary, a slight adjustment between the forehand and the backhand grip may be made. A detailed objective might be the automatic assumption of this grip as the type of appropriate stroke becomes apparent.

These examples listed are entirely skill objectives. Courtesies of the game might be a specific objective. The more specific objectives under *courtesies* might include accepting without adverse comment one's opponent's decisions as to "out" errors, commending one's opponent when he makes a nice stroke, giving him the benefit of the doubt when there is uncertainty about the exact score, retrieving a loose ball on one's own side of the court and returning it to the opponent, when he is serving, so that he may catch it without expending extra energy, and the like.

The teacher's aim in these cases is to have the entire class accomplish *all* the objectives selected for attainment. This aim is unattainable, and yet it is the end toward which he continually strives. It is understood that if the original aim is "low" enough, it can be attained. If this is the case, a new and higher aim is constructed. Only in this way is growth attained.

SOURCES OF OBJECTIVES

Techniques for determining objectives. It is clear that since the objectives under chief consideration are those that relate to the pupil, it is necessary to find out what pupils are like. We have already learned that the pupil's needs, interests, abilities, and peculiarities tell us a great deal about him.

But how are these facts discovered? One way is actually to observe children as they go about their daily lives, for the purpose of seeing their peculiarities and noting their abilities, interests, and needs.[7] This method is more successful with elementary than with junior and senior high school pupils. A *second* way is to find out what experts in child life and child psychology have discovered; this is most easily done by consulting the writings of such experts. A *third* way is to list all objectives mentioned by authors of texts on child psychology, and select those most frequently mentioned. *Fourth,* one may analyze the needs and interests of adults. This method is limited because conditions will be different when the present generation of children reach adulthood. *Fifth,* one may analyze the needs of society as set forth by frontier thinkers. *Sixth,* one may seek the interests of children by gaining the information directly from conversations with the pupils themselves. *Seventh,* one may test children to ascertain their abilities. And *eighth,* one may compare a child or group of children with the "average," to ascertain the peculiarities and needs of the former.

Individualizing objectives. It will be noted that these are methods of finding objectives for children by understanding the children themselves. Teaching based upon this information alone is too general to be helpful to a particular, individual child. The next step, therefore, is to study carefully the individual, with the discovered objectives as guides.

There is no need to pretend that a physical education teacher can actually set up a separate set of detailed objectives for each child, especially if he is the only physical education teacher in a school of hundreds of children. In many localities, not only does the physical education teacher teach all the children in the school, but the classes are unusually large, the time short, and the class meetings held once or twice a week.

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[7] Harap, Henry, *The Technique of Curriculum Construction,* page 38. New York: The Macmillan Company, 1931.

Such undesirable situations, however, must not confuse us as to the real problem. The physical education teacher cannot assume that all the children are identical. Such an assumption leads to poor teaching and disciplinary problems. But the teacher is successful to the extent to which he "reaches" the individual pupil. One way that many individual pupils are reached is through the individualization of physical education. This process is impossible until the teacher has studied the pupil and his background.

Physical education as a source. Another major source of objectives is found in physical education and the ways it is interpreted. We find physical education giving rise to different types of objectives, in terms of different kinds of changes experienced by the individual.

OBJECTIVES INHERENT IN PHYSICAL EDUCATION

1. Objectives related to the skills of an activity, such as learning to serve in tennis
2. Objectives related to knowledges, such as rules, strategy, and systems of play
3. Objectives related to attitudes toward such things as activities, officials, spectators, and other participants
4. Objectives related to appreciations exemplified in the recognition of good performance and of appreciation of the opportunity to serve as a leader
5. Objectives related to feeling, such as enjoyment, pleasure, and exhilaration
6. Objectives related to ideals, such as the "full life" and "a strong mind in a strong body"
7. Other objectives related to acquirements, such as organic vigor and bodily strength

The objectives inherent in physical education as a field may be interpreted into these seven divisions. These objectives are realized by the pupil through participation in activities and according to the way the activities are taught. A graphic representation, Figure 3, may serve to clarify the relationship.

The teacher as a source. It is obvious that not many desirable objectives could actually be secured from physical education without that all-important factor, the teacher. It is the teacher who analyzes the child, the group of children,

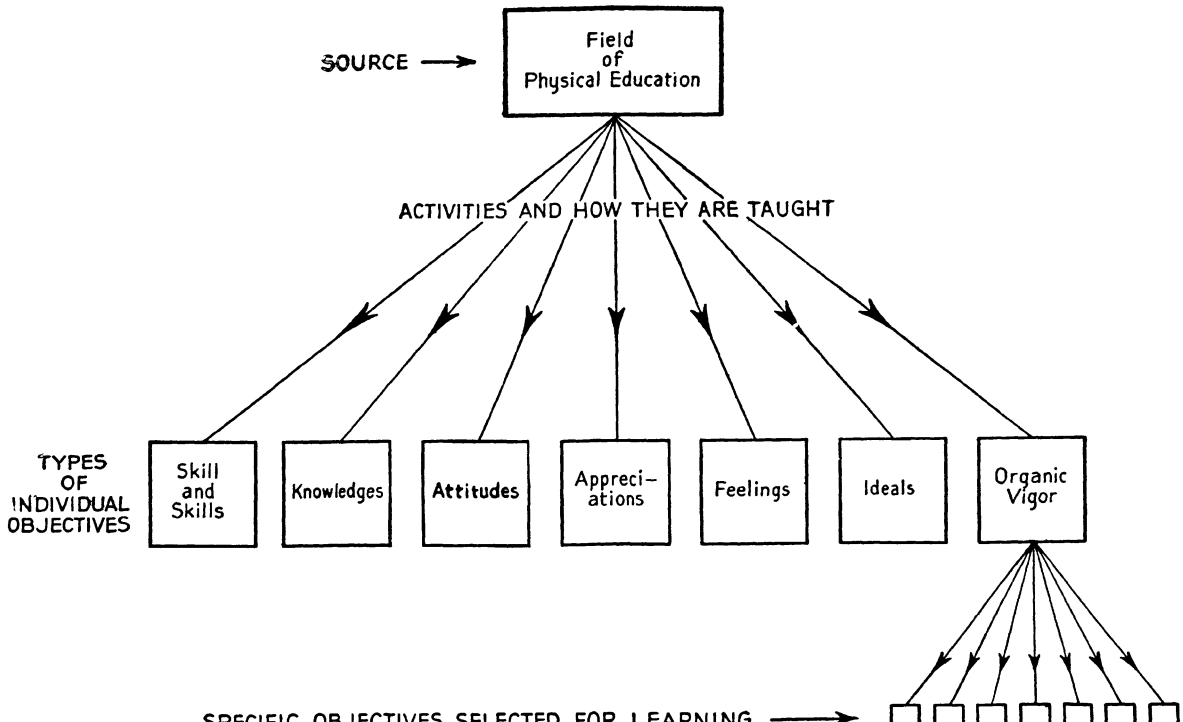


FIGURE 3. ROUGH ANALYSIS OF PHYSICAL EDUCATION AS A SOURCE OF THE PUPIL'S OBJECTIVES

and physical education. It is the teacher who guides the selection of objectives from his experience, training, philosophy, education, and thinking. Regardless of the potentiality of an activity, worth-while objectives will usually lie dormant within the activity unless seen, brought forth, and nurtured into development by the teacher. It is, therefore, difficult to overemphasize the unavoidable and crucial responsibility placed upon the teacher.

Some teachers may have taught for several years and never fully realized the weight of this responsibility and the fine opportunity it presents. *What physical education does to and for a pupil is in the hands of the teacher.* He is more than an instructor of skills and a "ball lender." He is the person who sees that objectives are attainable and attained by the pupil, for this is the only way the teacher has of making it possible for the child to develop and unfold.

Textbooks and courses, as sources. Different but frequently used sources of objectives are in textbooks and professional education courses in physical education. These short-cut methods, like most short cuts to education, are only partially satisfactory. It is true that many texts and professors present helpful lists of objectives. However, these can seldom, if ever, be in satisfactory form because such objectives are not based upon intimate knowledges of particular pupils, a given environment, specific activities, and a certain teacher.

A curriculum-builder, author of a textbook, or professor may, of course, assume the "average" child, "average" environment, "average" program of activities, and "average" teacher, and thus arrive at "objectives-to-be-used-on-the-average." This contribution is not to be disparaged or belittled. These are the guides that have directed and still help the teacher. But no author, professor, or curriculum-builder would claim for a moment that this type of general analysis is a substitute for the teacher's task of selecting objectives in co-

operation with pupils. Teachers who expect to use, without critical analysis and careful application, this work done by the writers of textbooks and teachers of professional courses, are not unlike the pupil who expects to learn to play basketball by watching the teacher play. Neither develops successfully in the activity he has selected.

QUESTIONS

1. In terms of the pupil, what types of objectives are there?
2. Where do objectives come from?

SPECIFIC OBJECTIVES AND THE "PART METHOD"

Teachers misled. Some teachers have not realized, apparently, that, while objectives may have to be chopped into digestible pieces, the activity need not be presented to the learner as a series of segregated bits. Some teachers believe that the best way to teach any physical education activity is first to teach its various parts. These parts are sometimes called "skill elements" or "activity elements." Some teachers have understood that these must be taught as isolated elements.

Questionable assumptions. For some time it has been recognized by experienced teachers that specific objectives facilitated effective teaching and learning. Some of these teachers believed the various activities, therefore, would have to be broken up into parts and learned separately. It was assumed that these parts or elements had to be taught to the learner as *isolated* learnings. The result of these beliefs was that the pupil was asked first to practice one skill, then another, and so on until all the parts of an activity were learned separately. We can refer here to an earlier illustration wherein it was assumed that if a pupil learned such skills as passing, catching, shooting, turning, pivoting, and dribbling as isolated accomplishments, he was then ready to play basketball! The point was made that in a real game, a

player must know not merely how to pivot but also which way, when to the split second, and where. He must know not only how to cut for the basket but when, how fast, and at what angle, in terms of the defensive setup of the moment and the position and movement of the ball. Furthermore, practicing skill elements in isolation does not duplicate the emotional tension, the "electrified" atmosphere, and excitement characteristic of actual game conditions.

Activity elements and the whole pattern. No case is being made for learning to play the game merely by playing the game and that alone (although conclusive experimentation may show this to be the best way to learn some activities). On the other hand, no case is being made for trying to learn to play the game by practicing isolated parts of it.

Some evidence shows that the pupil should begin by learning the whole activity, followed by short periods of practice on meaningful parts of the whole activity which need special practice. Following this short specialized practice, the participant immediately thereafter participates again in the whole activity so that the skill upon which he has been practicing again becomes a part of the whole activity pattern. Practice that is too long or too isolated upon a segregated element, such as the dribble, makes the participant "dribble-conscious." He learns the dribble outside of the whole pattern, basketball. He still has to learn when, where, how fast, and what type of dribble to use as the hair-trigger game situations arise. He must also learn to weave the skill element (dribble) into the whole pattern of the game. The same principle applies to the other parts of the game.

It is to be noted that not knowing when to dribble, for example, is apt to be as disastrous in a game as not knowing how to dribble at all. Pupils who overdo such fundamentals are criticized by the teacher and coach, but often this overemphasis by the player comes only because the skill was overemphasized by the method of learning set up by the teacher.

It is also possible to interrelate a part being practiced separately by tying it up with the game situation. This act is done not merely by talking about it but by setting up a situation that resembles a game.

What has this to do with objectives? Just this! The teacher can set up a skill objective such as: "correct technique in executing a particular type of bounce-pass with a guard directly between the passer and the receiver." The pupil can understand and desire to attain this objective. However, the setting up, understanding, and desiring to accomplish this objective do not mean that the game of basketball must be broken up into and *taught* as isolated skill elements. It is possible for the pupil to accomplish such skill objectives during the progress of the game. In this way, the objectives that have primarily to do with skill acquirement are accomplished together with the many other objectives that have to do with such attainments as acceptable social behavior (team play, good sportsmanship), those that have to do with enjoyment, those that relate to organic development, as well as the objectives that have to do with the when, where, how fast, which way, of the execution of skills in the game. It is fully recognized that in some activities it is necessary first to teach isolated skills for the sake of safety and protection.

As soon as the pupil realizes or is made to realize that he needs special practice upon an activity element, or upon the desirability of playing fairly, or upon exercising self-control "under fire," the teacher provides a special opportunity for the pupil to set about correcting his error or lack of ability. Sometimes this means going out of the game for short periods of practice on the side lines. At other times it means the pupil's concentrating on a given skill during participation in the whole activity. At still other times it may mean being withdrawn from the game for unfair play or lack of self-control.

There is no conclusive evidence as to whether the whole,

part, or the whole-part method is the best way to learn physical activities. It may be that no one of these three methods is applicable to all types of activities. But, we do know that merely because objectives are broken up into detailed accomplishments is no reason to break an activity up into skills-to-be-learned-in-isolation. The importance and value of the whole activity to the pupil should be kept in mind in all physical education.

QUESTION

If specific objectives are constructed for an activity, is it necessary that the activity be learned in specific parts? Why?

DIRECT AND INDIRECT OBJECTIVES

Emphasis determines direct objectives. The pupil and teacher cannot concentrate simultaneously upon all the objectives set up. Rather, one objective of a given type, such as skill development or team play, is singled out for special emphasis for a given period of time. Emphasis may be shifted to some other objective of the same kind or to another and entirely different type as the situation demands. Looking at this situation from one viewpoint, we might say that the objective receiving emphasis for the moment is the direct objective for that moment; all others are incidental temporarily and, therefore, indirect.

This statement means that there may be a constant flow of emphasis from direct to indirect objectives, and vice versa—that is, the indirect objective becomes the direct objective when the teacher selects it for special attention or acquirement. This is one of the tests of successful teaching—to know when to concentrate upon a given objective. While the teacher is apparently deeply engrossed in seeing that a skill objective is attained, he does not miss an opportunity to change his emphasis and to focus the pupil's attention upon the acquirement of another objective, such as good sportsmanship, self-control,

or aggressiveness. The question of what objective to stress and when to select another one for emphasis is a matter of judgment—the teacher's judgment. In turn, this judgment is based upon what the teacher believes is most valuable for the pupil at the particular time.

Indirect type of objectives. In physical education we tend customarily to emphasize some types of objectives more than we do others. Because most learnings in physical education arise from participation in activities, we tend to think of skill acquirement, for example, as a direct *type* of objective. We also tend to think of objectives that accompany or "go along with" participation in activities as an indirect *type* of objective; not that they are less important, but rather that they often occur concurrently with the type of activity that encourages their appearance. For example, organic vigor accompanies participation in vigorous activities. It is interesting to note that organic vigor is a major objective of physical education; yet in the same sense that we do not directly call the student's attention to it, it is often an indirect *type* of objective. This fact raises the question: "Do we too often leave the accomplishment of certain worth-while objectives to chance?" That is, do we take for granted that they will be attained? The answer is unquestionably "Yes." Sportsmanship, fair play, courtesy toward officials and opponents during highly competitive games, organic vigor in less strenuous activities, safety skills, and many desirable attitudes toward physical education, toward social conduct, and toward the teacher, are examples.

Indirect *types* of objectives are of two kinds, associated and concomitant. They correspond to associated and concomitant learnings. Associated learnings are those rather closely related to the primary learnings of the pupil. For instance, while a pupil is learning to dribble in basketball (primary learning), he also learns the rules that limit the dribble. Learning these rules is one type of indirect objective (if the direct objective for the pupil at the moment is to learn how to

dribble). Some teachers emphasize the academic content of an activity at certain times with the result that "to learn the rules" becomes a direct objective.

Another type of indirect objective is related to concomitant learnings—those that "come along with" and are sometimes almost "hidden" from primary learnings. For instance, while the pupil learns to pivot according to the rules, he also learns to like or dislike pivoting, learns certain attitudes toward the teacher, learns that his shoes do not fit or tend to slip on the floor.

It must be understood that not all associated and concomitant learnings are of the indirect *type* of objective. An illustration is found in this reference to shoes. It might very well be that selecting and wearing properly fitted shoes is made a direct objective early in the season. Ordinarily teachers think of the indirect *type* of objective as being related to associated and concomitant learnings of the pupil. However, at times the direct objective of the teacher is an associated or a concomitant learning of the pupil.

Teacher's and pupil's direct objectives may differ. Some teachers seldom, and sometimes never, give enough time and attention to the concomitant learnings because they are supposed to "come along with" the primary and associated learnings. It is as though some teachers assumed that nothing could be done to control this type of experience of the pupil. Often, the teacher's objectives might very well be so to adjust the environment, so to use teaching techniques, so to present activities, and so to guide the pupil that the concomitant learnings are vital matters.

At certain times and places, the teacher's paramount, and therefore direct, objectives might very well be to see that certain concomitant learnings receive a primary place in the *pupil's* learning; yet, simultaneously, the pupil may be concentrating on another objective that is more meaningful to him at the time. For instance, the teacher may make a concentrated effort to teach basketball so that it will be *liked* by

the pupils, which is the teacher's direct objective for the time being. Simultaneously, the pupil's direct objective might be to demonstrate successfully to the teacher that he can "shoot fouls," "shoot baskets," "cut for the basket," or "pass accurately." It follows that the teacher's direct objective is not always the pupil's direct objective. Furthermore, it is clear that the ofttimes unemphasized phases of physical education might very well assume the role of direct objectives for the teacher.

QUESTIONS

1. What determines whether an objective is direct or indirect?
2. Should the teacher's direct objective always be the pupil's direct objective?

Analyzing objectives. The larger purpose or aim of physical education, as we have seen, gives general direction to physical education. In order to secure more definite concrete guides for teaching and learning, major objectives are constructed, and these in turn are broken down as has been demonstrated above.

The accomplishment of the major objectives by the pupil is no easy task. In fact, it is doubtful whether a person ever fully accomplishes them, but the pupil begins to reach *toward* their accomplishment after learning and attaining many and varied specific objectives in different situations.

Let us use an illustration to show this process. Assume that desirable social behavior is one of the major purposes of teaching physical education. No teacher can begin teaching such a generality as desirable social behavior to a child. He must begin by teaching first one and then several *specifics* of social behavior which the child is guided to recognize as desirable and upon which he places value. And from these acquirements he is led on to others. In this way he grows and develops.

Eventually the child begins to recognize that acceptable

social behavior is made up of many acts, knowledges, habits, and attitudes. All of us continue to learn more and more about social behavior as we lengthen and broaden our experiences. We never fully master it.

The teacher thus guides the pupil into many and varied experiences in physical education that present opportunities to learn certain aspects of acceptable social behavior. The teacher *fuses* these experiences from time to time so that the pupil recognizes them as part of desirable social behavior—that is, the teacher continually maintains a liaison between the major objectives and their modifying objectives. The teacher fosters the acquirement of this major objective by setting up, with the cooperation of the pupil, any accomplishments which promise to lead toward it. Finally, the pupil, after a great variety of experiences in acceptable social behavior, recognized by him as such, is better able to adapt himself satisfactorily to situations in a manner that is called "desirable social behavior."

For example, one specific objective of desirable social behavior is self-control; and one aspect of self-control is control of temper. The angry boy who loses his temper in an activity and commits fouls, finds that he is penalized for fouling; incurs the displeasure of his teammates, other classmates, and the teacher; and is less successful in skill-performances. Through teacher-guidance, gradually he learns to redirect the energy arising from this emotion (anger) into *socially approved behavior* in the activity. The boy also is led to learn to control his temper in many other and different situations. He also learns other types of self-control. And, as this process goes on, we can say that self-control is *growing* in this boy.

Through similar experiences in such characteristics as respect for the rights of others, friendliness, cooperation, fair play, and unselfishness, the boy gradually works toward the accomplishment of this major objective to a degree judged as

satisfactory for persons of his age. His task, of course, is not completed. As he grows older he is led to expect of himself a still greater development in desirable social behavior.

OBJECTIVES AND ACCOMPLISHMENTS

Difference between objectives and accomplishments. Accomplishments are the actual acquirement of objectives by the pupil. An illustration will clarify this distinction. A pupil's objective might be "to hit the bull's-eye in the archery target from a distance of 100 feet." It may take an hour, day, week, or month before this objective becomes an accomplishment. The objective may then become, "to hit the bull's-eye more than 50 per cent of the time." This accomplishment may take weeks or months, and only an understanding teacher and the pupil appreciate the concentration and effort that change this objective into an accomplishment.

Immediate and remote objectives. Objectives and accomplishments related to skills are more immediate than the objectives and accomplishments of some of the qualities inherent in physical education that are more remote, such as control of temper. One reason these qualities are remote is because it takes longer to accomplish them. Usually, they are also more difficult to accomplish. Let us cite an illustration. Here is a pupil who has a bad temper owing to early home training and a failure to put forth effort to control himself because of a lack of proper attitude or the failure to realize that a bad temper can be controlled. This particular pupil is an excellent basketball player as long as he keeps a level head. The teacher assists him in setting up the objective: "to keep my temper during the game of basketball." This pupil learns to shoot goals, dribble, and pass in a relatively short time; it may take him months and even years to accomplish the objective of keeping his temper in basketball games.

Immediate objectives and accomplishments often refer to

concrete items that can be tested, measured, or directly observed as well as those that are accomplished more easily and readily. The teacher and pupil have concrete proof that the immediate objective actually has become an accomplishment because the results are concrete, observable, and measurable. For instance, an objective for a twelve-year-old boy might be to run the 100-yard dash in fourteen seconds—the average speed for boys of that age. The stop watch indicates definitely whether or not he accomplishes this objective.

Remote objectives do not lend themselves so easily to measurement, although they are none the less real. There is no doubt but that enjoyment is a real phenomenon. We are at a loss, however, to know when a girl, for example, has accomplished such an objective as: "to enjoy breaking up a dribble in a hockey game as much as most of the other girls seem to." We cannot measure enjoyment; consequently we do not know what kind and amounts the other girls experience any more than we can test when, what kind, and how much enjoyment this particular girl may derive eventually. The best that we can do is to judge by such outward behavior as smiles, yells, and actions indicating enjoyment. Nevertheless, enjoyment is just as real as the dribble.

QUESTION

Why do we consider it easier for an immediate objective to be accomplished than a remote objective?

OBJECTIVES AND LIFE NEEDS

The good life. "It may all be very well to insist upon objectives to crystallize and give direction to teaching and learning, but is this the end?" An experienced summer-session student posed this question. He struck at the very heart of an important problem. Teaching may be improved, the learning of certain skills, knowledges, and attitudes may be

facilitated by the breaking-down of objectives into more specific and concrete elements, but of what actual *value* are these objectives?

The test of these objectives lies in whether they seem to fulfill the child's major needs. Do they add needed body-control skills, needed social prestige, needed self-respect, needed energy supplies? Do they add to his socio-motor tools and his social attitudes? Do they furnish means of self-expression? Do they develop greater confidence within the pupil in his own ability to meet life's problems? Do they aid in resolving his frustrations? Does the achievement of these objectives make him the type of citizen that contributes to the good of the State? Is he becoming an asset to society?

Opinions have varied as to both the extent to which and the ways in which physical education may help meet these needs. Minnie Lynn [8] has traced the development of man's concepts of physical education values from the thinking of pioneer man to the present post-war concepts. Early man's needs for fitting himself into a rugged natural existence motivated sturdy physical development. At times in man's history, religious and political beliefs have reduced or opposed emphasis on physical development and adjustment. Frequently, however, military demands have given strong impetus to the building of physical stamina and skills. The gradual evolution of (1) concepts of individual worth, (2) the trend toward educational focus on whole personality, and (3) the realization by society of the need to conserve the physical resources of youth, all have fostered physical education.

Democratic society combined with outdoor pursuits to influence wide participation in sports and games. American individualism with its need and demand for more active leisure time pursuits fostered sports and games. Repeatedly, wars focused attention on unfitness; and the pioneer concept

[8] See Lynn, Minnie Lynetta, *Major Emphases in Physical Education in the United States,* unpublished doctoral dissertation, University of Pittsburgh, 1944.

of the need for a sturdy physique slowly changed to a concept of functional efficiency with its hygienic implications.

The concept developed of recreation as leisure-time activity, as a means of social participation, and finally into the additional concept of recreation as therapy from the tensions and frustrations of increasingly complex civilization. With the changing concept came change in type of skills and conditioning and the growth of understanding of the social concomitants of cooperative-group physical activity.

Later refinements of these concepts, particularly under the stimulus of war's necessary census of the physical status of the manpower, brought out the need for *emergency* adjustive power. War analyses of physical inventories focused attention on the real worth of environmental facilitation during the individual's developmental years; and, of course, on the repair and renewal processes commonly called rehabilitation.

Objectives and preparation for life. Objectives are valuable to the extent to which they modify the child's life in desirable, beneficial, and worth-while ways. What is the process by which objectives function in this manner?

By means of supervised physical activity, physical education helps provide him with a *corpore sano,* it equips him with skills for safety and protection as well as for use in leisure-time activities, it assists in the development of a better personality,[9] and it gives him experience in conducting himself acceptably, according to social and moral standards.

Objectives and the pupil's present life. Physical education also contributes to the second part of the aim of general education—namely, making the child's education *real life* as contrasted to a hothouse type of life, or education in an academic vacuum. Even one day's observation of the average child's normal life forces the conclusion that a substantial portion of it is spent in physical activity.

[9] Link, Henry C., *The Rediscovery of Man.* New York: The Macmillan Company, 1938.

Objectives and improvement of life. In addition, physical education aims to prepare the child better for life and to prepare him for a better life. Organic development, the skills learned, the habits formed, the attitudes acquired are partially directed toward these two types of "betterment."

Since the aim of physical education is directed toward the life of the pupil, it follows that the major objectives leading toward that aim must be worked out in terms of improving the pupil's life now and later on. The point of emphasis is that physical educators are interested in physical activities as *means* of reaching these major objectives. Teaching techniques are of interest to teachers because they help make this possible.

It must be borne in mind that these major objectives are in terms of the real life of real pupils, not the hypothetical life of imaginary pupils. Some teachers and some students-in-training accept the major objectives of physical education but overlook the fact that these statements are more than fine-sounding phrases.

The analysis of objectives is one task. *Synthesis* is another and equally important task. An excellent set of objectives may be constructed on the one hand; on the other hand, there may be an excellent class of pupils. The two may exist utterly unrelated to each other unless the teacher becomes the force that binds the two together.

Versatility of objectives. Many inexperienced teachers think of objectives as fixed, rigid, and prescribed. In actuality, the teacher has great freedom in manipulating and interpreting objectives. For that matter, the physical educator is not forced to accept the major objectives now generally agreed upon by leaders. He may construct his own. In fact, it is best not to think of the major objectives as final. Just within recent years, we have added "the acquirement of skills for safety" as a major objective, so even these general objectives are flexible and sensitive to changing ideas.

Specific objectives are surprisingly versatile in their applications. Let us see how flexible they are.

VERSATILITY OF SPECIFIC OBJECTIVES

1. They may be constructed by any well-trained teacher
2. The pupil may be trained to construct his own objectives, with the teacher's help
3. They may apply to any phase of physical education
4. They are applicable to any pupil
5. They are applicable to the various kinds of school organization
6. They are applicable to various activities
7. They can be adapted to different levels of ability
8. They are applicable to various communities
9. They can be modified to conform to changes in the larger emphases in physical education.

Objectives are best conceived as versatile tools in the hands of the teacher, not standardized one-use tools. There is no one right way to construct them, select them, use them, or test them. This fact gives the teacher great latitude and freedom, but such prerogatives always bring unavoidable responsibility with them.

Specificity of objectives. Better teaching of physical education is dependent in part upon the objectives that are specific enough so that both the teacher and the pupil "know where they are going." To the degree that the teacher breaks down objectives into concrete, attainable elements that can be accomplished, are understood and appreciated, to that degree does his teaching take on effectiveness. That is, teaching is made more effective by being made more definite in several ways. *First,* the teacher has concrete ends toward which to drive; *second,* the pupil understands and can work toward real goals; and *third,* these definite goals make the selection of teaching techniques easier, more appropriate, more applicable, and therefore more efficient.

Let us make this point more concrete. Suppose the teacher is teaching handball. One specific "skill" objective selected (for and by the pupil) is "to learn to serve." As far as se-

lecting actual teaching techniques of how to teach the beginner to serve, the situation demands further analysis. For instance, the teacher must consider such factors as the following:

FACTORS IN SELECTING TEACHING TECHNIQUES

1. Age and grade of pupils
2. Previous background in similar activities
3. Physical condition of the pupils
4. Quality of their coordinations
5. The purposes of teaching this activity
6. Type of handball used
7. Type of court available
8. The number of pupils being taught
9. Amount of time available

Teaching techniques therefore are intimately tied up with specificity in objectives. Without specific objectives, teaching is merely muddling through, a hope-I-hit-upon-the-right-technique sort of procedure. Specific objectives are not a formula for teaching but are accurate suggestors of the selection and use of techniques and, as such, are therefore invaluable in teaching.

Any observer of teaching over a wide geographical area is impressed with the varieties of teaching techniques used by successful teachers in the many localities in hundreds of varied situations involving millions of school children. It is therefore understood that a given set of specific objectives does not inflexibly indicate a certain set of techniques.

The experienced teacher is unable to tell the novice how to teach desirable social behavior, but he can tell the beginning teacher one, two, or three techniques that have proved effective in helping the pupil learn control of temper when an opponent fouls him.

QUESTION

What do you consider when you appraise the use of an objective?

OBJECTIVES AND PROGRESS

One way to insure that one's teaching and program are forward-looking and progressive is to criticize one's objectives constantly. Suppose the major objectives are changed by the leaders. What then? Many teachers who read these pages have already experienced changes in the major objectives of physical education. Most of these teachers have followed these "trends of the times." They changed their concept of physical education as well as their ideas as to its purposes, because physical education changed. To the beginning teacher this seems sensible and proper, but it is not so easy to do as to think or talk about it.

Many students-now-in-training are taught for four college years that a certain set of objectives are the major objectives of physical education. They have been given the philosophical, scientific, psychological, and sociological reasons why these are the best major objectives. These prospective teachers will graduate and teach for several years, basing their teaching and program upon these major objectives. And then, a changed educational philosophy, a changed national economic system, or a changed political outlook may force leaders in physical education to change these major objectives. Physical education must synchronize with national life as it exists, not as it is fictitiously constructed in an idealistic vacuum.

Teachers must change. Former students-in-training may find themselves quite out of step—old-fashioned conservatives—if physical education suddenly changes. What will they do—stubbornly fight for the major objectives in which they were so thoroughly trained and which they so religiously followed? If not, they may have to change their techniques, change their programs, change much that was "truth" to them; in fact, change themselves rather drastically. And if they do not change, the professional parade soon leaves them

standing at the curb—"has-beens." The question is, therefore, when such a time comes, what will they do?

In some eras in this country's history, the old saying: "The one constant thing in life is change," was regarded as an academic truism. Events moved so slowly that the realism of the above axiom was not actually and actively experienced. But today, college youth know from experience that the proverb is true. Events in the politico-socio-economic scene in the last decade have changed with dramatic suddenness. It is for this reason that tomorrow's teachers probably will adjust a little more easily and quickly than did the teachers of a generation ago.

Teacher education changes. Another force is operating to make change easier for teachers. As has been stated previously, the trend in the professional education of teachers today is away from indoctrinated, panaceanic techniques and programs and toward the development of such qualities as self-reliance, initiative, and careful evaluation. The next generation of teachers will thoroughly and enthusiastically follow the goals of physical education, but at the same time they will be alert to change, segregate the chaff of fads from the wheat of trends, and thus keep abreast of progress. In so doing, they may be forced to distinguish between loyalty to an alma mater and loyalty to a profession that must play its part on the ever-shifting educational stage.

QUESTION

Even though the professional education in physical education of a teacher represents the best available preparation at the present time, sooner or later some of it at least will be outmoded. How can the teacher know what to discard and what to keep in order to keep abreast of the times?

EXPLANATORY OUTLINE OF OBJECTIVES

A. *Educational Objectives*—Set up by educators.

1. Knowing these enables physical educators to work toward

educational objectives. This professional obligation is a necessity.

2. We then may demonstrate specifically *how* we function as a part of education.
3. We then may show specifically how the objectives of physical education contribute to educational objectives.
4. If we cannot accomplish 2 and 3, we have no place in the schools.

B. *Administrative Objectives*—Set up for and by administrator in physical education in cooperation with the school administration.

1. Show in what *specific* directions the department of physical education should concentrate its work.
2. Provide definite emphases to make in administrating a department.
3. Serve as a blueprint for the administrator.
4. Give the specific goals toward which he should bend his efforts.
5. Serve as a constant check list to see whether or not, or to what extent, the department is accomplishing its avowed purposes.

C. *Teacher's Objectives*

1. Show just what the teacher is to do:
   a. with the teaching environment.
   b. with the activity.
   c. with and for the pupil.
   d. with himself in *preparation* for his job, the day's work, the year's work. For example:
      (1) dress.
      (2) appearance.
      (3) knowledges.
      (4) equipment and facilities.
      (5) skills (demonstration).
2. Indicate *methods* of teaching:
   a. The coach's and teacher's methods may be different because their *specific* objectives vary, their situations are dissimilar.
   b. Teaching methods vary between two teachers; one reason —they conceive of their specific objectives differently, e.g., *basketball.*

Methods vary because specific objectives vary:
(1) One teacher—high degree of skill development.
(2) Other teacher—reasonable skill development, but main purpose—a good time, desirable attitudes, acceptable conduct in social situations.

D. *Pupil's Objectives*

1. These objectives make the teacher study the pupil:
   a. Needs.
   b. Interests.
   c. Peculiarities.
   d. Abilities.
   e. Potentialities.

   Specific objectives are in terms of these factors, whether they are in skills, attitudes, organic vigor, or social conduct.
2. They make the teacher *figure out* (after understanding pupil) *how he can get pupil to cooperate, to accept, to substitute* some of the pupil's objectives (which originally may be shortsighted, harmful, etc.) for some of the objectives known by the teacher and society to be more valuable in the "long run." We cannot expect the child to choose the best objectives for himself without guidance.
3. They make the teacher recognize that pupils can. and some do, set up other objectives besides the ones agreed upon by the teacher, by the remainder of the class, by society.
4. They make the teacher more alert, observing, conscious of getting all pupils to try to accomplish the more acceptable objectives.
5. They make the teacher think in terms of the child, and therefore better able to talk and apply in terms of the child.

E. *Activity's Objectives*

1. They make the teacher "figure out" potentialities "inherent" in each activity selected.
2. They make the teacher analyze the activity into its possible objectives. These may serve as specific teaching points.
3. Knowing the specific objectives of an activity helps the teacher see more clearly what should be taught with reference to the activity and learned before the activity is mastered by the pupil, and what the child can get out of the activity (besides skills) if it is well taught. This knowledge better enables the teacher to *evaluate* the activity.
4. They show the teacher at what points he can join pupil objec-

tives and activity objectives, thus revealing gaps in the activity and gaps in the pupil's learning.

F. *Class, Lesson, or Grade Objectives*
   1. They help the teacher determine the specific accomplishments for a class or grade (if this is desirable).
   2. They help the teacher see *beyond* the activity and *beyond* the individual pupil and check on the group's accomplishments.
   3. They help the teacher set up definite accomplishments for one given lesson.
   4. They help the teacher set up definite accomplishments for larger areas of time (if this is desirable).
   5. They help the teacher present a better balanced program, a more varied program, a program adapted to *this* grade, a program for *this* class.
   6. They help the teacher gain progression in the program from grade to grade, lesson to lesson.
   7. They give the teacher some definite guides to follow in teaching a given lesson, some definite steps to be accomplished in a given grade.

SAMPLE TEST ITEMS

True-False

1. If a teacher tells pupils they will acquire certain outcomes by participating in a certain activity, the pupils can be counted on to try to acquire these outcomes.

2. Since pupils are not mature and experienced, they should have nothing to do with selecting objectives.

3. The specific objectives of an activity invariably lead to the major objectives of that activity.

4. The plan of presenting the objectives of education as proposed by the Educational Policies Commission is an example of the step-by step process.

5. Physical education contributes to all the major and minor objectives of education as presented by the Educational Policies Commission.

6. Teachers' and pupils' objectives of physical education are certain to be identical.

7. The life of the pupil is one source of objectives of physical education.

8. Most of the objectives of physical education should relate to skills because of the nature of physical education activities.

9. The final selection of outcomes which the pupil strives to accomplish is one of the responsibilities of the teacher.

10. Physical education, regardless of the teacher, contributes to "the good life."

11. Because the major objectives of physical education are set up by leaders in the field, the teacher should accept these as invariable rules by which to guide his program.

12. The selection of teaching techniques is facilitated by selecting specific objectives which the pupil strives to attain. The teacher's first task, therefore, is to break down the major objectives into hundreds of minor objectives.

13. The part method of learning is the best way for a child to learn physical education activities.

14. The whole method of learning is the best way for a child to learn physical education activities.

15. If the pupil is learning an activity by the whole method, the teacher does not call attention to correct or incorrect performances in parts of the activity.

16. Objectives invariably are either direct or indirect.

17. An objective may be of an indirect type but be a direct objective at a given time and place.

18. A teacher's direct objective is certain to be the pupil's direct objective, if the teaching is good.

19. Remote objectives are not so genuine and real as are immediate objectives.

20. Immediate objectives are apt to be more measurable than are remote objectives.

Multiple Choice

Below are objectives that might be set up for football by the (1) administrator, (2) teacher, (3) pupil; objectives of the (4) activity, objectives of a (5) specific lesson. Write the word (any of those numbered) after each statement of objectives that most nearly describes which viewpoint of objectives the phrase expresses.

1. Social prestige, emotional excitement and thrill, self-respect and self-realization. [ ]
2. A varsity sport to develop leaders in fitness. A type of "honors course" for the top ten per cent in physical achievement: *i.e.*, for those of high rank in strengths, endurances, skills, etc. [ ]
3. Specific skills: kicking and catching, fast starting from line position. [ ]

4. Body control skills, energy, emotional control, willingness to labor, and sacrifice for a group-conceived goal. [ ]
5. Specific skills, certain physiological conditionings and fitnesses, with social and emotional concomitants. [ ]

Matching

Directions: Put number of the concept in the blank space in front of definition which most nearly fits the concept.

CONCEPTS	NUMBER	DEFINITIONS
1. Objective		Emotionally colored idea of procedure or situation, desirable but scarcely attainable
2. Accomplishment		One's subjective judgment of what is of worth to oneself
3. Attitude		Tendency emotionally toned to act in a certain way toward a situation or group of similar situations
4. Appreciation		Anticipated and desired outcome
5. Skill		Achievement
6. Value		Ease and precision in performance of acts
7. Ideal		Sensitivity to the full worth of something.

Completion (fill in the blanks with the appropriate word or words):

Techniques for Determining Objectives

1. Actually observe _____ as they go about their daily lives.
2. Find out what _____ in child life and child psychology have discovered.
3. List all objectives mentioned by _____ _____ _____ on child behavior and select those most frequently mentioned.

4. Analyze the needs and interests of _____.
5. Analyze the needs of _____ as set forth by frontier thinkers.
6. Seek the _____ of children by gaining the information directly from conversations with the pupils themselves.
7. Test children to ascertain their _____.
8. Compare a group of children with _____ to ascertain the peculiarities and needs of the former.

Yes—No

1. Does the pupil know what he needs and how best to meet those needs?
2. Should the pupil help decide the objectives of the Activity units?
3. Is there a fallacy in the pyramid analogy of the minor objectives all building up to the major objectives?
4. Do specific objectives tend to establish relationships (blend) before forming higher objectives?
5. Are these established steps, to follow in teaching, in proceeding through the more specific objectives of a field?
6. Is progress in educational practice facilitated by regular steps through established objectives?
7. Does analysis of objectives into detailed specifics for daily achievement tend to make more clear the major objectives?
8. Are the "Seven Cardinal Principles" and the purposes of education as presented by the Educational Policies Commission similar?
9. Can one be *completely* educated through Physical Education?
10. Should we expect our pupils to accomplish fully the major objectives of Physical Education?
11. May a generalized habit or attitude be developed from a variety of applicable but specific experiences?
12. Would it be advisable to have the pupils propose the objectives of each activity period?
13. Do most suitable objectives vary with each pupil?
14. May the teacher bring out a variety of types of worth-while objectives from one activity such as volleyball, for example?
15. Should the teacher base his selection of lesson objectives on the needs of the average student?
16. Is a specific objective justifiable if it does not contribute to acquisition of one of the major objectives?
17. Are all other aspects of the school—administrative, supervisory, and so forth—justifiable only if they contribute directly or

indirectly to the pupils' attainment of the major objectives of education?

18. Are the major objectives of physical education well established and are they universally agreed upon?

19. Should the teacher and the pupils attempt to agree upon the worth-while specific objectives of each activity?

20. Will the techniques of teaching vary with the type of specific objectives chosen for the activity period?

21. Can the teacher emphasize a specific objective (say a specific skill) to such a degree that there will be no associated or concomitant learnings?

22. Is it valuable to have some immediate objectives that offer the possibility of complete rapid accomplishment?

23. May the remote objective be of much greater concern to the child than the immediate objective?

PART II REVIEW TEST ITEMS

A. *Matching*

Below are two columns of words. Those in the left-hand column are numbered. Place a given word's number opposite the statement (in the right-hand column) that most closely corresponds to the meaning of that word. Grading Plan: Number correctly matched.

WORD	NUMBER	STATEMENT
1. Principle		Minute and critical examination
2. Method		Proficiency in many things
3. Methods		Ability to guide pupil behavior effectively
4. Philosophy		Partially substantiated hypothesis
5. Scientific approach		A pellet-form of one's philosophy
6. Versatility		Pertaining to man in his social relationships
7. Analysis		Factual study of the entire situation
8. Disciplinary ability		All factors included in the teaching process

WORD	NUMBER	STATEMENT
9. Social distance		General but concrete ends set up for attainment
10. Theory		Results, accomplishments
11. Ingenuity		Detailed, concrete ends set up for accomplishment
12. Hypothesis		Value, consequences, purposes
13. Sociological		Conclusion based upon facts and near-facts
14. Aim		Degree of formality between persons
15. Major objectives		Assumption based upon reasoning
16. Specific objectives		Ways of facilitating learning
17. Outcomes		Cleverness in inventing and originating

B. *Essay Type*

1. In what ways is teaching physical education (*a*) similar and (*b*) dissimilar to coaching athletic sports?

2. Defend either the negative or affirmative side of the following proposition: *It is more difficult to be an effective coach of athletic sports than an effective teacher of physical education.*

3. Why has the profession of teaching produced fewer "greats" than the profession of medicine?

4. (*a*) What are the meanings of the philosophical, scientific, psychological, and sociological approaches to teaching? (*b*) Why should a teacher understand and use these four approaches?

5. Construct an original aim of physical education.

6. Why is it more accurate to say that objectives lead *toward* the aim of physical education instead of saying that objectives lead *to* the aim of physical education?

7. In what ways do you distinguish between "teaching" and "techniques of teaching"?

8. Take the negative or affirmative side of the following proposition and defend it in approximately one hundred words: *Success in teaching is more dependent upon the use of specific techniques of teaching without a knowledge of the principles of teaching than upon the use of the principles of teaching without a knowledge of the specific techniques of teaching.*

9. Give two illustrations to show why the teacher's selection of

techniques of teaching is considerably aided if he knows the specific purposes for teaching a particular skill or activity.

10. Briefly describe three ways you could teach volleyball to seventh graders so as to make it more valuable to these pupils than the ordinary way of teaching this activity to children in this grade makes it.

11. Give an illustration showing why teaching techniques and activity content are inseparable.

12. Give an example from your own experience showing the power of environmental factors upon human conduct or behavior.

13. If the statement is true that two teachers may use two different sets of teaching techniques with equal effectiveness in the same situation, why are some teachers ineffective teachers?

14. If there are no "best" techniques of teaching, how can there be master teachers?

15. What are some of the difficulties encountered by the teacher in listing objectives into such categories as (*a*) major, (*b*) specific, and (*c*) more specific?

16. The newer major purposes of education are related to: self-realization, human relationships, economic efficiency, and civic responsibility. To which of these four areas does physical education contribute most richly and in what ways?

17. If the teacher's, pupil's, activity, class, and lesson objectives are often dissimilar only in their wordings, why should objectives be divided into these categories?

18. What are the four major sources of objectives?

19. Defend or attack the following proposition: *Since the pupil lacks the experience, judgment, and maturity of the teacher, the pupil should have no part in selecting the objectives of a given activity or lesson.*

20. (*a*) Which of the four major sources of objectives is apt to yield the most *valid* objectives? (*b*) Why is this source not used to a greater extent by teachers of physical education in the (1) elementary, (2) junior high, and (3) senior high school?

21. What is the *ultimate* criterion of the value of any given set of (*a*) major objectives, (*b*) specific objectives?

22. If the establishment of specific purposes of teaching an activity aids the teacher in selecting teaching techniques, why should not teaching that activity in specific parts invariably aid the pupil in learning the activity?

23. (*a*) When may an objective be termed a direct objective?

(*b*) How do you distinguish between a direct objective and a direct type of objective? (*c*) May an objective be a direct type of objective but be an indirect objective at a given time and place? Give examples to illustrate your answers to (*b*) and (*c*).

24. If the statement "The teacher has not taught unless the pupil has learned" is true, how do you explain that the teacher and pupil may have different direct objectives?

25. Attack or defend this proposition: *The teacher is responsible for that which the pupil learns as well as that which the pupil does not, but should, learn.*

26. Is the process of changing objectives into accomplishments the duty of the (*a*) teacher alone, (*b*) pupil alone, or (*c*) teacher and pupil? Why?

27. Take the affirmative or negative side of the following proposition and defend it: *In spite of the statement in the text, I believe it is more professionally admirable to be loyal to that which I was taught at my alma mater than to discard it when and if it is superseded by new facts and ideas.*

28. Explain these statements: (*a*) The "Activity is merely a means"; (*b*) "Physical Education is as much concerned with the child's present life as it is with 'Preparation for Adult Life' "; (*c*) "In the ascending order of objectives from very specific through specific to major objectives, the process of acquirement is one of fusion and coalescence, not one of additive accumulation."

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III.

How Are Activities Selected?

5.

Value Concepts in Relation to Teaching

In Chapter 4, we discussed objectives. Objectives were outcomes hoped for by the one who selected them. If the teacher selected the objectives, he was the one who hoped the outcomes or results of the learning experiences would achieve his idea of what was desirable; *i.e.*, the objective. If the teacher was able to induce the pupils to accept the proposed objective, then teacher and pupils were in agreement as to hoped-for outcomes.

The meaning of value. The process of getting the pupils to accept wholeheartedly the teacher-proposed objectives implies the arousal of a want, a desire, a voluntary choice on the part of the pupils. They come to *value* the teacher's hoped for outcome. Value is a matter of feeling. It exists only in the psychic nature of the one who feels the worth, makes the choice, desires, wants the satisfaction. The given value may be a complexity of feelings common to mature, educated adults. This is the type of feeling we refer to when we speak of society's values. Any particular value may be felt by one individual; but not be felt by, and therefore not be a value to, another individual.

Value is the motive power behind action. We act as we feel. In discussing value one tends to forget the highly subjective and individual nature of feeling. Whenever the word "value" is used, one should examine the context to see to whom the feelings are attributed. The "feeling judgment"

may be the teacher's or the pupil's; or it may be an objective superimposed on the teacher and pupils by a value of the administrator or a community-group.

An abstract intellectual concept of a possible objective, without any accompanying individual feeling or desire, is *not* a value. Values are feeling attitudes toward facts, conditions, or behavior. They do not exist outside those possessing the feeling. The implication is not that value judgments are without evidence and reasoning. It is hoped that they are based on factual evidence and reasoning. But the judgment must have feeling tone to be preferred and to get action.

The whole process of evaluation implies a weighing and a comparing of value concepts. The individual weighs, evaluates, makes relative-worth classifications, and thereby builds his system of values. If he builds this feeling-guide to his life pattern on mankind's experience, he is said to desire "the good life." "The good life" is a somewhat vague concept of a hypothetical hierarchy of values. It is imaginatively constructed out of ideals conceived by many individuals over centuries of time. It is probably never a real value-concept; *i.e.*, it is probably never desired in detail and in its entirety by any one individual. Perhaps it would be clearer to say that each individual has his own "good life" value-concept.

The teacher automatically applies some criteria of values to the selection of activities. He may weigh the activities in terms of values set up by society, such as *unselfishness, respect for the rights of others, health,* and *fair play;* or he may make his preferences in terms of his own personal system of values, which doubtless includes some of society's values; or he may consider the system of values held by the pupil. The thoughtful teacher will have weighed the evidence and established in his thinking a ranking of values as to relative worth.

The complexity of value. The program includes activities that contribute to that which is valuable to the individual and to society. Activities are selected that have *immediate* indi-

vidual value and *deferred* individual value. The program also includes activities that have immediate and deferred social values.

The teacher takes into account the fact that values change. *Circumstances and conditions* change man's personal values and society's values. The pupil, through the maturing process, also changes. Economic, educational, and political changes spell modified values for all of us. Not so long ago, leisure-time activities were considered by society as of value chiefly to the ne'er-do-well, the wealthy class, and children. After the onset of the depression of 1929, Great Britain and the United States began spending millions of dollars on recreation regardless of the individuals' socio-economic or educational levels. A young farmer thinks of golf, tennis, or squash as largely valueless to him. Oil is discovered on his land. In time he finds himself in a new environment, on a different socio-economic level, with new friends, and participating in new activities. Golf, tennis, or squash take on new values for him. Changed circumstances mean new values and thus changed behavior.

The student-in-training finds, after graduation and a few years of teaching and coaching, that many of his former values have largely faded. As a mature coach, he remembers his novice years when he placed little value upon caring for the health, welfare, and future of his players as compared with winning a game, a championship. If *increased age* brings with it increased wisdom, the individual acquires new values, modified values, higher values. Furthermore, we teachers are faced with the question of the degree to which we should select activities that apparently are of value to most of the group, but of little or no value to a given few. Should we select special programs of activities for the few, or should they conform to a program of activities that is of little value to them?

An activity may be of more value at one time, at one stage

in the pupil's life, than at another time. Follow-the-leader and singing games are of more value at the primary level than in senior high school. At what level does the value of an activity cease or become so negligible that good judgment indicates the selection of other activities? We have to be alert to those activities that will be most worth while to the pupil at each stage in his life. Then we must return to the former questions: Most worth while individually, to the class, or to society? Now, or ten years from now?

Guidance in the selection of activities that are to be of "most value" is therefore an involved task; yet the conscientious teacher will not be prevented by these difficulties from attempting to consider in a practical way these many facets to the problem.

VALUES AND THE INDIVIDUAL

It is difficult to label a value as definitely "individual" or "social." A social value such as *respect for the rights of others* may reflect upon the individual, having more effect upon him than the group. An "individual" value such as *self-control* may reflect from the individual that uses it to the entire group. Most social and individual values are cyclic. They form beneficial circles. For the sake of roughly separating values which seem to be related most directly to the individual from those which seem to relate to social situations, the terms "individual values" and "social values" are used.

Pupil's system of values. The teacher faces the problem of offering the most valuable type of program. He goes as far as he can in offering a worth-while program in spite of the limitations that exist. Activities are selected which are of most worth to the pupil as a member of the social group, in spite of the teacher's personal interests. Careful study is also given to the pupil's system of values. The child has his ideas of what is worth while, what is satisfying to him, al-

though he may lack words to describe why he likes to run better than he does to read (if he does). At the less mature levels the pupil does not judge his values. He is satisfied with the feeling of enjoyment in having the impulse of the moment satisfied.

The task of the teacher therefore is first to understand those activities or parts thereof upon which the pupil places some or much value—merely another step in understanding the pupil. We hear a good deal about studying the individual, but rarely is this phase of understanding him, his system of values, given much attention. And yet, this is one of the keys that unlocks the door to the formation of desirable attitudes. It is one of the bases for intelligent teaching. Is the pupil in a "state of readiness" if we try to teach him something upon which he places little value?

Values and consequences. Let there be no mistake here. The pupil has his own subjective feelings of worth, of value. This statement means that rowdyism, bullying, beating the rules, and disobedience are "values" to pupils who feel like doing these things. The task of the teacher, after he understands the pupil's subjective feelings, is to guide the child into applying some judgment and reflection to his values. He must be shown that certain of his values lead into "blind alleys," cause the loss of his friends, lack permanence, or whatever may be the consequences.

Thinking of and experiencing the consequences of possessing certain values and acting accordingly make the pupil examine his system of values. Foreseeing or experiencing unwanted consequences helps force him to apply intelligence in weighing his values. This is one way of motivating him to raise his values, to acquire new and desirable ones. Almost invariably this process leads him gradually to accept and adopt many of the fundamental values approved by society. Such guidance accelerates the pupil's changing his values. It is excellent developmental experience for the pupil to ex-

amine his values critically, to see consequences, rather than to depend upon the teacher's "thinking for him" or waiting for him some day to "see the error of his ways."

Anticipating values. Undoubtedly there are some adult-conceived values that the pupil at a given age cannot comprehend because of his immaturity, lack of experience, lack of judgment, lack of opportunity and training. The nine-year-old does not appreciate the values of team play. But the teacher anticipates and prepares him gradually for the time when he is ready for such an appreciation, the time when he demands such experiences as *making sacrifices for the good of the team.* Formerly, we teachers were taught that children were not ready for team games until they were in the sixth grade. There were few efforts or plans to lead the pupil up to this level of maturity. Sixth graders were suddenly catapulted without preparation into a program of team activities. It was assumed that when team games were suddenly started, the pupils would suddenly appreciate and recognize team-play values such as *give and take, doing yeoman service so a teammate could score, accepting responsibility for team failure, the fun of playing appropriately in an integrated group unit,* and *the satisfaction of helping in team achievement.* Children gain deeper feelings of value from an activity, sooner, if they have been prepared gradually for it.

The value of emotional control needs introduction long before the age of fourteen. *Respect for the rights of others* is a value that should grow through the nursery and kindergarten ages. A tendency toward *sociability* has to be developed gradually in the introvert. The teacher by example, illustration, and demonstration gradually exposes and introduces the pupil to the worth-whileness of experiences beyond his present comprehension. Furthermore, we should remain critical of our present ideas of *when* to begin introducing these different values. For example, English teachers have found that children are "ready" far earlier for many words and aspects of English than thought possible a few years ago.

Pupil opposition. This task is more difficult than has been described because of pupil opposition. A teacher may gradually and circumspectly make a certain emphasis in an activity or guide the pupils into selecting a given activity for the chief purpose of exposing them to experiences that hold values yet to be appreciated. The pupil does not know why, but he may not like and is not interested in this new emphasis, this new activity. When such a reaction is *general* in the class, the teacher can be rather sure that this technique of introduction was faulty for this particular group. But he does not give up trying to initiate the early beginnings of an appreciation of a certain value. Pupils' specific likes and interests are acquired. Taking on new likes and interests is a part of their education. The introduction of new values and new activities demands an understanding of the pupil, and ingenuity in making the new as acceptable as possible. Introducing the idea for the first time to primary grade pupils of playing an activity on the partner basis instead of on the individual basis takes more finesse than merely saying: "choose a partner for this next game." Introducing to a high school pupil the idea of assuming considerable self-direction in planning his own program of physical education is not easy. Nevertheless, the skillful teacher can make just such an introduction.

A list of individual values. What are some of the values, more individual than social, that should be considered in selecting activities for a physical education program? Here are a few suggestions:

1. Development and maintenance of organic power.
2. Utility skills such as walking, running, lifting.
3. Motor skills in individual and dual activities.
4. Self-control, emotional control.
5. Accurate, appropriate knowledges pertaining to physical education activities.
6. Proper attitudes toward play and recreation.
7. Self-expression.

8. Poise.
9. Perseverance.
10. Courage.
11. Self-discipline.
12. Pupil freedom in making selections.
13. Character development.
14. Carry-over skills.
15. Creativeness.
16. Confidence.

Finally, the young teacher is warned not to be too aggressive in modifying the values held by pupils and in introducing values which the pupil is not yet in a position to comprehend and appreciate.

VALUES AND SOCIETY

Conflicts between individual and social values. One sometimes reads that there should be no conflict between that which society considers valuable and that which the individual believes is of value to him. The fact is that there are many conflicts between these two systems of values. Society's set of values is an expression of the experience of the race. A democratic society considers as valuable that which is worth while to most persons, most of the time, under most circumstances.

It is not difficult to see that there are many instances when the individual does not fall into the category of "most persons." It is also clear that there are occasions that permit or demand that the individual violate or ignore truth, health, courage, and other values set up by society for the individual. However, man lives within society. He learns by tragic experience or imperceptibly that some of his values get him into trouble, get him nowhere, or get him into jail.

The individual adjusts his values. Experience teaches the majority of us that most of the time we must adjust our system of values to those of society. The individual may retain some of the values that conflict with those of society, but too many

such conflicts and too great a degree of conflict are not tolerated by society. The individual who retains too many values disapproved by society is ostracized, isolated, or incarcerated. The conflict between the individual's values and those of society often arises because of the difficulties of sheer existence. The pupil, like his parents, *wants to be recognized, wants to be successful, wants to be respected, wants to achieve "self-hood."* The values set up by society for the individual, such as *fair play, tolerance, courtesy,* and *loyalty,* largely overlook the personal desires, personal strivings, personal hopes of the individual.

On the other hand, the pupil must be made to see and accept that most of society's values are worth while for the individual. Society does not overlook the individual. Society considers the fact that the individual is a member of a group. Society's hierarchy of values for the individual are of the highest type, from the viewpoint of group living. The pupil should be helped to understand that the satisfaction and expression of personal desires do not always represent personal values, when all conditions and consequences are considered. The pupil experiencing difficulty in adjusting his system of values usually can be shown that it is possible to secure the recognition and respect of his fellows, for example, by following a different route. The highway carrying markers labeled *cooperation, self-control,* and *honesty* is the road recommended by society. *Selfishness, deceit, beating the rules,* and *double-crossing* may get him along the road, but not far.

Social values. Both society's and the individual's system of values include social values such as *friendliness, respect for the rights of others, consideration of the safety of others, adjusting to the interests of the group, alternating leadership and followership, give-and-take in competition, sense of responsibility to and for the group, law-and-order,* and *unselfishness.* These are examples of qualities and experiences of the indi-

vidual that possess what we call social value. These values acquirable through physical education suggest the need for examining critically many a physical education program. Such values may indicate the elimination of some of the time-honored activities and the inclusion or invention of other activities. They may suggest new emphases to be made in physical education. The guess is hazarded that we have not even scratched the surface in enabling pupils to recognize and experience the many social values that are inherent in physical education activities.

BIOLOGICAL VALUES AND PSYCHICAL CONCOMITANTS

Another general type of value that may be thought of as more directly related to the individual than to social situations is the biological. The biological values of physical education are particularly important because they emphasize the *basic*, age-long relationship between man and activity. Whether man's nature, his nurture, or both originally caused his "hunger for activity" is not important at this point. It is significant to note that activity enabled man to live. And it probably had a good deal to do with his evolution. Every normal person has drives for activity—even though many civilized adults repress these drives until such desires are dwarfed and squeezed beyond recognition and consciousness. Let us now consider seven examples of values of a biological nature.

Growth and development. One kind of biological value is the stimulation which physical education activities give to *growth* and *development.* Activities affect the rate and kind of *growth* and *development* of the pupil. Some teachers have been shortsighted in offering programs only for the statistical, observed, or hypothetical *average* pupil in a given *average* grade or of a given *average* age. Most of their programs are based upon ideas and writings expressed prior to modern studies and concepts of education, learning, childhood, and

adolescence. One biological value of physical education is indicated by the fact that no child reaches normal growth or enjoys normal development without beneficial kinds, amounts, and intensities of activity. Man inherits a dependency upon activity.

Vigor. Another biological value of physical education is *organic vigor.* The individual inherits his basal organic vigor and the degree to which it can be developed. Other sources of organic vigor are physical activity, endocrine glands, and food. Organic vigor is an expression of the strengths, resiliencies, responsiveness, and densities of the vital organs. It is clear that individuals vary in their respective possessions of organic vigor. In the past, physical education has adjusted itself too crudely to the individual's organic power—or failed to adjust at all. Furthermore, we have failed to pay sufficient attention to the term "beneficial kinds, amounts, and intensities of activity." Floyd Rowe's research [1] in Cleveland indicates some of the disadvantages of too much and too intensive activity for growing youths. One purpose of physical education is to maintain and develop organic vigor, not to devastate it. Physical education for individuals must be adjusted to their respective capacities and needs for organic vigor.

Relaxation, rest, reduced activity. The pupil also inherits demands for *relaxation, rest,* and periods of *reduced activity.* Basal metabolism, the interphase of cell mitosis, the chemico-physiological results of fatigue, the rest periods of the heart, and sleep illustrate this fundamental law of nature. Physical education must include activities and be organized so that these three complements of activity are provided for. The length, number, and spacing of rest, relaxation, and reduced activity depend upon the individual and the length and intensity of the activity program. Some physical education

[1] Rowe, F. A., "Growth Comparisons of Athletes and Non-Athletes," *Research Quarterly of the A.P.E.A.,* Vol. IV, No. 3, pages 108–117 (October, 1933).

programs are so poorly organized that normal pupils spend the majority of their time "standing around." McCloy [2] says, in commenting on this point: "We cannot obtain stimulation for growth and development in five minutes twice a week" of vigorous muscular work. We are certain that McCloy would not subscribe to the idea that we have orgies of vigorous physical activity in an effort to make up for lost time, because we have the pupil only once, twice, or three times per week. We do not think that McCloy believes in whole class periods without rest, relaxation, and reduced activities. The biological resultants of rest, relaxation, and reduced activity are as much the basis of life as activity and food.

Strength. Another value of certain physical education activities which has biological roots is *strength.* Some leaders [3] today seem to decry the direct seeking of strength. Other leaders [4] point out that, although the pupil is a unity of mind and body, he is more body than mind; that the physically undeveloped child develops feelings of inferiority; that persons without adequate strength are easily fatigued and, therefore, susceptible to such minor ailments as colds, and work at a lower level of muscular efficiency; that the strength of the organic systems comes through vigorous activity. One's philosophy of physical education would have to parallel McCloy's before he could agree with McCloy's statement: "I believe that a P.F.I. of 120 would, at the present stage of physical education and recreation in our country, be of more value to more people than would be the skill to shoot eighteen holes of golf in 72." [5] As far as teaching techniques, the

[2] McCloy, C. H., "Forgotten Objectives," *Journal of Health and Physical Education,* October, 1937, Vol. VIII, No. 8, page 512.

[3] Williams, J. F., *Principles of Physical Education,* pages 381–384. Philadelphia: W. B. Saunders Company, 1938.

[4] McCloy, C. H. "How About Some Muscle?" *Journal of Health and Physical Education,* May, 1936, Vol. VII, No. 5, page 303.

[5] McCloy, C. H., "Forgotten Objectives," *Journal of Health and Physical Education,* October, 1937, Vol. VIII, No. 8, page 512.

program, and realized values are concerned, it makes quite a difference whether strength is directly sought or whether it is incidentally acquired as the pupil participates in activities. There can be no argument that a great many acts and conditions in life are dependent upon strength and that it, in turn, arises from activity.

There are different kinds of strength, depending upon the kind of activity involved. For example, if the teacher is interested in the pupil's acquiring certain strengths that will enable him to do certain things or fill certain gaps, the selection of activities is made accordingly.[6] Strengthening certain muscles and muscle groups is beneficial to many pupils with structural and functional defects, in addition to those children who have no defects but simply lack the strength and "muscle habits" to avoid feelings of inferiority.

Skill patterns. Another source of biological value is the *neuromuscular mechanisms.* Some of the values of the skills arising from these mechanisms are discussed in Chapter 14. Pupils differ in potentialities for neuromuscular mechanisms. Some pupils will probably be limited in the excellence of their performance in many physical education activities. Others seem to possess a tendency toward a high-order type of skill acquirement. If the individual's neuromuscular mechanisms are to provide the realization of values, the degree of difficulty of the skills attempted and the rate of the pupil's progress from less to more difficult skills must be considered. It is not difficult for a teacher to eliminate some of the values of physical education if the pupils become skill-addicts and too conscious of skill standards and norms. No point is being made for the teacher's or pupil's being satisfied with poor performance, unless such performance represents the pupil's best. Some ability is requisite to participating and therefore being in a position to enjoy any activity. Yet

[6] Matthias, Eugen, *The Deeper Meaning of Physical Education,* pages 7–17. New York: A. S. Barnes and Company, 1929.

at the present time some individuals "go through" twelve years of physical education and consider themselves worse than "dubs." They are "dubs" in the only physical education they had the opportunity of experiencing. There has been too much glib use of that clever term, "a physical education moron," as though the particular kind of physical education given to the individual were the only physical education possible or worth while! Physical education activities should be selected in terms of the individual's neuromuscular uniqueness, if this biological equipment is to be a source of most value.

Physiological conditioning. There are biological values in the activities that exercise *physio-chemical processes.* The chemical expenditure and restoration during activity, and the conditioning of the circulatory, heart, and respiratory-regulating mechanisms are real values. The time, intensity, and length of participation in activities are limited by these factors. Exercise of these mechanisms keeps them flexible, adjusted, and "educated." The well-trained athlete normally enjoys a finely coordinated physio-chemical organization. His heart and lungs are well synchronized. Fatigue products are quickly eliminated. Fatigue is postponed. The teacher of physical education considers the physio-chemical relationships when he starts each class with a "warming-up" activity and closes with a "cooling-down" activity. The teacher is alert to symptoms in the individual that may indicate an obvious upsetting of these physio-chemical relationships. He avoids activities that tend suddenly, or over a protracted period, to throw into unbalance these relationships.

Satisfaction, joy, and release through activity. The brain and the nervous system are the means by which values are recognized and felt. Through these mediums the individual experiences feelings of joy during and from activity, the satisfactions that arise from performance in activity, the

divergence of worry that may result from long hours of sedentary tasks, and the releasing of tension and emotions. These psychical experiences [7] are real even though they are difficult to explain. Matthias points out that man is very individualistic in the extent to which he reacts to types of activity. The activity that brings greatest satisfaction, joy, and release to this person, brings just the opposite to another person. No one has a right to deny each individual his own "particular taste for physical and psychical experience and expression." In fact, activities reach their highest ability to provide physical types of values when the psychic experience is most pleasurable. The brain and nervous system are a source of value. They enable the pupil to make decisions, solve problems, use judgment, plan, create, and analyze.

More and more we are selecting activities, creating opportunities, and making emphases in activities that render such developmental values available to the pupil. More and more we are recognizing opportunities for giving pupils these valuable experiences in connection with activities. For example, some second grade pupils decide such matters as whether the weather today indicates an indoor or outdoor program, select the activities and where they should be located on the floor or field, plan the number of pupils for each activity, and set the distances between bases and goals. Junior and senior high school pupils can *help* plan their own programs, create new activities, officiate, and help analyze the performance difficulties of other pupils. The scope and degree of responsibility and difficulty of such tasks are related to the degree of maturity of the individual.

Before closing this discussion on biological values it is admitted that these values were not taught effectively in many schools in the past. The performances of servicemen in physical fitness tests during World War II indicate how few

[7] Matthias, Eugen, *The Deeper Meaning of Physical Education*, pages 17–21. New York: A. S. Barnes and Company, 1929.

of them had placed value upon vigor, strength, endurance and skills. Furthermore, most of them preferred recreational activities of a sedentary type.

INHERENT, "EXHERENT," AND "FALSE" VALUES

Meanings. Inherent values are those that are ingrained within the activity. "Exherent" values are those that are superficial, unconnected, supplementary. "False" values are those labeled "false" by someone who does not regard certain values as authentic. In the preceding paragraphs we were considering inherent values. Examples of exherent values are medals, cups, athletic scholarships, and grades (marks).

Interpretations. Some teachers and coaches have the faculty of focusing the pupil's attention upon the exherent values. This is unfortunate because there are so many inherent values to be recognized. It is unfortunate because the pupils under such tutelage not only miss many inherent values but are encouraged to look for exherent values in other life experiences. Pupils taught to expect exherent values are always asking: "What do I get out of it?"—meaning, of course, what *unrelated award* is forthcoming. There can be no question that exherent values are values. But, in terms of developing, educating, guiding the pupil to select higher values and more permanent values, the chief emphasis upon and pursuit of exherent values is shortsighted.

So-called "false" values do not exist. Some values held by one person may seem false to another person. There are cases in which an individual assigns value to an experience which seems or is proved to be invalid. One example is the value formerly assigned to breathing exercises—namely, the increased supply of oxygen carried by the blood to cells and tissues. Researches, observations, and the experience of the race sometimes show (to those who will believe) that the values they formerly attributed to certain objects and experiences are invalid.

A given activity or experience may not lose all of its value merely because certain supposed values related to it are disproved. Some experiences have value but not in the way a person imagines. Take the case of the individual who takes a leisurely stroll once a week. He imagines he is receiving all the beneficial physiological results that accompany vigorous physical activity. Of course the fact is that such slow walking produces very little organic stimulation. Yet, the individual feels better. Changes of environment, change of activity, the effects of the multifold stimuli of nature produce psycho-chemico-physiological results which make him "feel better." The psychical attitude has very definite effects on the physiological state.

Then, of course, there is the case of a person's believing that an experience has value when it may actually have disvalue. Take, for example, the neurotic who says that bridge is relaxing to him, while the close observations of friends and his family testify that he is more neurotic after an evening of bridge. The game is of some value to him, but it is a disvalue in the very area in which he imagines it is of value.

The teacher makes certain that the values used as a basis for activity selection are of the highest possible type, valid and authentic. This seems particularly necessary if one considers the small amount of time available in a class period to permit the values to be appreciated and experienced.

POTENTIALITIES AND REALIZED VALUES

Activities vary in potential values. Any desirable physical education activity has certain inherent values that are potentialities for worth-whileness to many pupils, personally or socially. Some activities have richer potentialities than others. For example, most teachers believe that swimming and basketball, given under proper conditions, are potentially more rich in values to most pupils than dumbbell exercises and high-bar work given under favorable circumstances.

After considering the community, the school, the specific environment in which the activity is taught, the equipment, the pupil, and the teacher's ability, activities are selected which seem of greatest potential value to the individual and the group.

The good teacher brings out potential values. Many inherent values of an activity remain within that activity, unrealized and undiscovered by the pupil. Tennis, as taught by some instructors, can seem to be almost devoid of immediate value to the individual. The game becomes little less than a set of boresome drills. But tennis, as taught by other instructors, seems rich in values immediately recognized and felt.

In the majority of such instances, the difficulty is the lack of leadership. Why select an activity rich in potential values if the teacher fails to make them available to the student? It is said that the first president of the University of Chicago taught Sanskrit as though it were an adventuresome sport. Could it be that some teachers of adventuresome sports teach them as though they were Sanskrit? One does not have to travel far to see physical education activities stifled with too much teacher domination, too meticulous attention to rule observance, too much stopping of the game for instructing one player, too much emphasis upon attainment of specified skills, too much emphasis upon one general type of activity throughout a month's program.

The attractiveness of the modern program of activities has permitted some of us to become lazy as teachers. Our efforts at making the activity as valuable as possible in every way possible to as many pupils as possible are weak compared with the masterly teaching of many old-time "formalists" and many coaches of athletic sports today.

The teacher and realized values. School administrators cannot be blamed for beginning to expect to see many more *realized* values from physical education. They cannot be

blamed for becoming impatient over the potentialities in physical education that go undiscovered from year to year. This is one of the most common criticisms of teachers of physical education by administrators. Without proper teaching, the modern program can be less valuable than the old formal program which has been so roundly ridiculed in some quarters. If values of physical education or of a given activity occur automatically, why have teachers? If these values we have claimed and still claim for physical education arise from activities without leadership and guidance, there is little need to use the term physical *education* activities. In fact, one wonders why more school administrators have not demanded that we show them "realized" values not just "claimed" values.

Teaching is a word of degree. One's results depend upon one's expertness at teaching. We physical education teachers who have been guilty of permitting many potential values in physical education to go unrecognized and unexperienced by pupils can improve. Teaching can be changed to *better* teaching.

CONDITIONS LIMITING VALUES

Conditions related to the pupil. The values of an activity vary according to certain conditions. No activity has a certain number and degree of values for all pupils under all conditions. One of these conditions has just been discussed—namely, the quality of the *leadership* of the teacher. Reference has also been made to the pupil's *age* as a factor that determines the number, degree, and type of values realizable from a given activity.

The pupil's *sex* indicates that some activities are of little or no value. Boxing, wrestling, and football have more disadvantages than values for girls. The *ability* and *educability* of the pupil in physical education activities are other limiting factors. Activities requiring a high order of co-

ordination and neuromuscular mechanisms have more values for pupils who have greater skill potentialities. What profits it a pupil to spend hours attempting to master skills clearly beyond his capacity? The pupil's *needs, attitudes,* and *interests* are well-known factors that limit the value of activities.

Physique, physical condition, and *structural* and *functional maturity* are four other factors that govern the values a pupil may experience from a given activity. The more vigorous, competitive, intensive sports such as football, boxing, lacrosse, and wrestling have values for boys who are physically fitted to enjoy the values of such sports. Those who are not physically qualified for such activities may experience more disvalues than values. The same principle holds for girls participating in hockey and basketball.

Conditions related to the situation. Facilities and *equipment* and the *immediate environment* limit the values in activities. Swimming, often rated as "most valuable" physical education activity, has many disvalues if the water is unfiltered and unsterilized, the pool uninspected and improperly located, constructed of improper materials and unwisely planned.

Particular attention is being paid to protective equipment in activities such as heavy apparatus work, hockey, football, and boxing. Many constructive steps are yet to be made in modifying facilities and equipment so that activities become more worth while to larger numbers of persons. Some changes are being made; for example, the facilities and equipment of baseball have been modified, and we have softball or playground baseball for millions of girls, boys, men, and women. In a few junior high schools the basketball goals are lowered two feet, a smaller ball is used, and the playing space is decreased in size. The degree to which present activities may be changed if desirable is almost limitless.

Conditions related to the activity. Most of these changes in facilities and equipment mean *revisions of the rules,* which,

in turn, usually *change the content of the game.* We are beginning to see a great need for many modifications in parent activities. Football is being modified so that it is of value to many thousands of boys who should not play it in its regular form. Six-man football is one such modification. Basketball can be modified so that it is worth while to many thousands of junior high school girls who should not play it under the present rules. George T. Stafford, University of Illinois, has modified many sports so that they are suitable for students in the so-called corrective, restrictive, or adaptive groups. There is much yet to be done in changing the rules and content of activities so that pupils lacking requisite degrees of motor ability for satisfactory participation may compete. It is not only easier to adjust activities to individuals than *vice versa,* but activities when suitably modified are of more value to the individual.

Other conditions. Another condition that limits the value of an activity is the factor of *time.* This factor includes the length of the physical education period, the number of pupils per instructor, the time of day the physical education class is held, the number of times physical education is offered per week, the season of the year that a given activity is offered, and the length of time pupils participate in a given activity.

These and other conditions, such as the *local situation, teaching techniques,* and the *teacher's skill* in using these techniques, are constantly operating to decrease or increase the number, degree, and type of values which a pupil or pupils recognize and experience from a physical education program or from one activity. The well-trained teacher is not so much interested in the "book" values of physical education or of an activity as he is in the values that are actually experienced by the pupil or pupils. On the other hand, the stated values as outlined in books, pamphlets, and courses of study are of assistance to the experienced teacher. He, in turn, can contribute much to courses of study. The tech-

niques of "uncovering" values in activities used by successful teachers might be suggestive to persons constructing courses of study. These various conditions that limit the value of activities are mentioned as areas in need of study or modification, or facts to be faced by the teacher. They cannot be ignored by any teacher interested in better teaching in physical education.

SAMPLE TEST ITEMS

Yes—No

1. Are one's values at twelve years of age the same as they will be at sixteen?
2. Do society's values change with time and experience?
3. Is the teacher likely to be able to arouse the teacher-desired value-concepts in all members of his class?
4. Are value-concepts chiefly dependent on physiological maturation?
5. Should the teacher expect all members of a particular class to attain the same value-concept?
6. Is the development of pupil value-concepts an educative process?
7. Does the statement, "The teacher must educate the pupil to worthier values," assume that the value-concept is a purely intellectual process?
8. Does the impulsive responding of the younger children to temporary and fluctuating drives imply the possession of value-concepts?
9. Might the particular techniques chosen by the teacher induce contrary feelings instead of the hoped for value-concept?
10. Does adjustment to society imply a change in value-concepts?
11. Does the term "social values" imply that the pupils are in agreement as to worth-whileness of certain social behavior patterns?
12. Are the so-called "biological values" only values to those who recognize them as desirable?
13. Can the teacher see that pupil values are realized without developing pupil value-concepts?
14. Is degree of realization of values highly dependent on the total learning environment?

Matching Questions

CONCEPTS	NUMBER	DEFINITIONS
1. Value-concept		Values that depend on the activity itself for arousal
2. Deferred value		Classification of an individual's asserted value by one who possesses no such value concept
3. Inherent values		Meaning with accompanying feeling tone
4. Individual values		Possibilities in the activity of fulfilling pupils' needs unrealized to date by the pupil
5. Immediate values		Superficial, unconnected, supplementary values
6. False values		Values pertinent to personal needs, wants, and development
7. Society's values		Values requiring considerable time and effort before any great degree of realization is attainable
8. Exherent values		Desires capable of being satisfied now or very soon
9. Potential values		Concept and feeling agreements of the mature, educated adults

True-False

1. The teacher of physical education always selects activities of most value for a given class.

2. The experienced teacher considers other systems of value besides his own in activity selection.

3. Activities that are of value to the group are of more worth than activities that are of value to a given individual.

4. The pupil is more apt to be interested in the immediate values of an activity than is the teacher.

5. Values change.

6. If an activity is of a given quality of value, it possesses this quality regardless of other factors.

7. If an activity is of little value to a few pupils in a given class, they should take it anyway because it is of value to the majority of the class.

8. Values can be placed into two distinct categories, individual and social.

9. The "law of readiness" is related to a pupil's system of values.

10. A pupil may be too immature to appreciate the value of activities which in a few years he will greatly desire.

Multiple Choice

1. To prepare the pupil for values-yet-to-be-appreciated, the teacher should:
   - *a.* Tell the pupil he will some day appreciate these things.
   - *b.* Gradually lead the pupil through activities to experience to some degree the beginnings of these values.
   - *c.* Ignore the fact that the pupil does not like the new experiences.
   - *d.* Refrain from offering any opportunities for participation in experiences that are not liked by the pupil.

2. Examples of "individual values" are:
   - *a.* Courage.
   - *b.* Initiative.
   - *c.* Respect for the rights of others.
   - *d.* Unselfishness.

3. "Individual" values and "social" values:
   - *a.* Never conflict.
   - *b.* Should conflict.
   - *c.* Sometimes conflict.
   - *d.* Should never conflict.

4. The development of strength is a biological value of physical education activities because:
   - *a.* It is a guarantee that pupils will use strength for social purposes.
   - *b.* It is necessary to carry on life's activities.
   - *c.* It helps overcome feelings of inferiority in some pupils.
   - *d.* It is synonymous with health.

5. Exherent values are:
   - *a.* Often easier for the pupil to appreciate.
   - *b.* More permanent than inherent values.
   - *c.* Worth more to society.
   - *d.* Worthless.
   - *e.* More educational than inherent values.

6. The teacher, as a leader of physical education activities:
   a. Can change potential values into realized values.
   b. May make available few values.
   c. Is responsible for the values that accrue.
   d. Is the sole judge of when values are realized by pupils.

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6.

Salesmanship in Physical Education

"Man is inescapably a salesman of himself and all he represents."

WHETHER HE recognizes it or not, in social situations the teacher is a salesman of himself and his program. It may appear illogical to discuss salesmanship before we consider the product to be sold. This chapter is placed here for the purpose of emphasizing the need of the teacher's becoming a better salesman.

The word *salesmanship* is used because it implies customers who are perhaps neutral or even antagonistic toward physical education. The word refers, however, to the techniques used in gaining acceptance of the educational experiences. It is understood that no teacher is justified in selling as "educational experience" any "subject matter" the worth of which is questionable. Rather this concept of salesmanship implies two viewpoints common to all true education. One is the ideal presented in Plato's allegory of the Cave. Those fortunate individuals who have struggled out of the darkness upward into the light are obligated to go back down into the Cave and attempt to reorient the others. The other concept is really a product of historical experience—that human progress does not result from benevolent despotism but from persuasion and guidance in a democratic environment. In other words, ethical salesmanship is an obligation of all educational leaders; and such salesmanship is the best means of fostering social progress.

One reason why some teachers have not demonstrated better salesmanship in the past is that they failed to examine carefully and appraise the product—the physical education program. A better understanding of salesmanship and recognition of its place in education brings into focus the necessity of studying the program from many points of view before attempting to sell it.

Some teachers of physical education have been able to "get away with" rather poor programs for a number of years because of the popularity of activity and because administrators knew so little about physical education. It is difficult to believe that the current wave of curriculum revision will pass over physical education. As a matter of fact, physical education is on the crest of this wave, and already courses of study in physical education are being revised in terms of such factors as will be discussed in the following chapters. In the meantime, let us investigate this proposal that the teacher become a better salesman.

The need for salesmanship. Let us illustrate this point. Beginning with the economic depression of 1929 and for several years thereafter, physical education was eliminated from many public school programs. It was one of the first "subjects" to be eliminated. After a few years it was restored in most schools; in fact, it has been given more consideration and recognition than it previously held in many localities. Poor salesmanship permitted an easy elimination of physical education, in spite of the real need for it. If physical education had less apparent value, it probably would not have been restored to the curriculum during these present times. The point is that school officials discovered for themselves the essential nature of physical education.

Today the general field of education has grasped the idea that worthy products have to be sold. Education is using the radio, public forums, adult education, and a dozen other avenues of selling. The public is bombarded with so many

ways to spend its money that education must continually sell itself or be ready to have other agencies take some of the public funds allocated to it.

If good salesmanship can stimulate an administrator or a community to adopt and support a good program of physical education, why not use it? Obviously no program ever sold itself. Leaders sell programs.

Difficulties in selling. Some products are easier to sell than others. Physical education is difficult to sell to the administrator, *first,* because of prejudices persons have against physical education which are based upon experiences they have had, and because of willy-nilly programs they have observed; *second,* physical education is a new addition to the curriculum and can expect to receive the raised eyebrow of skepticism; *third,* physical education deals with "the physical" which still conflicts with "the mental" in the thinking of the academician; *fourth,* results have been difficult to show because of a lack of tests or the failure to use them; and *fifth,* physical education fails to draw the favor that athletic sports enjoy with the public because of its lack of entertainment appeal and social prestige.

Gaining confidence. Even though a school principal or superintendent is skeptical of physical education *per se,* or if he hesitates to approve an enriched program, he is apt to tolerate it at least, providing he has confidence in the teacher. This attitude makes the task of the new teacher difficult because he has not had an opportunity to prove his worthiness for the administrator's confidence. Well-intentioned novices in any field unwittingly make mistakes. Errors of the teacher are laid at the doorstep of the administrator. The young teacher's lack of judgment because of insufficient knowledge of pupils, school, and community often results in serious consequences.

One way to gain and maintain confidence is to demonstrate good judgment. This judgment results from basing a de-

cision upon all pertinent information with a view to the many possible consequences of the decision. When a teacher exercises good judgment it is apparent in his appearance, conversation, and personal relationships, as well as in his program of physical education.

A *second* way to inspire confidence is to prove to be reliable. The teacher must show even in minor tasks that he can be counted on, that he can carry responsibility through to the desired end, that he is worthy of trust, and that his word is accurate and free from emotionalisms.

A *third* trait that begets confidence is to demonstrate an understanding attitude, which is basic to intelligent cooperation. This characteristic shows a willingness to "put yourself in his place" and to compromise for the welfare of those concerned. Teachers who show this quality also demonstrate their recognition of the importance of establishing cordial relationships with others.

A *fourth* way the teacher can stimulate the confidence of others in himself is through careful preparation. The person who plunges into a task unprepared can expect to encounter trouble. Preparation means being forearmed, anticipating difficulties, being foresighted.

Interestingly enough, these and the other traits basic to confidence are also the characteristics we look for in persons from whom we like to buy. Successful business enterprises are built on confidence. The lawyer, physician, and minister must inspire confidence if they are to succeed as professional men. The student-in-training must demonstrate to his professors that he deserves such trust in his ability and judgment. The same statement applies to the teacher in relation to his administrator.

QUESTIONS

1. Do you object to a discussion of "salesmanship" and "selling"? Why?

2. As a young teacher, how can you manage to "sell" physical education to an administrator who does not know you?

Teachers of physical education who have the confidence of their administrators may not need to sell a proposed program to them. If the teacher is progressive, however, he will wish to promote, experiment with, sponsor, or extend some aspect of his program which will demand a knowledge of selling. Beginning teachers certainly need the instruction and practice in professional selling. What are the principles upon which good salesmanship is based?

STEPS IN SALESMANSHIP

The *first* step is to be sold personally on the product. The teacher is bound to believe in the product because it represents his best thinking and his best efforts.

The *second* step is to study the customer. What are his special interests, hobbies, and peculiarities? Interests are the weakest point in one's armor of sales resistance.

The *third* step is to decide on the most advantageous way of presenting the product. What points should be mentioned first? Should one keep "an ace in the hole"? What points will appeal because of the customer's standards or his system of values? Is the customer the type that wants "the cards laid on the table" at once or is he the more sociable type? What objections will possibly be raised and how shall they be answered?

The *fourth* step is to select a time and place advantageous to selling the customer. He should be free from distractions and irritating disturbances. Is he in a better state of mind in the morning or the afternoon?

The *fifth* step is the approach, wherein the information gained in Step No. 2 is put into operation. (This step is presented in detail later in this chapter.)

The *sixth* step is the presentation, in which the plans made in Step No. 3 are carried out with modifications. (This step is presented in detail later in this chapter.)

The *seventh* step is the sale, in which the customer is led to make a favorable decision.

After a teacher is well established in a community, he may supplement these seven steps by enlisting the aid of such an organization as the P.T.A. or of the press in creating a demand for the idea, plan, project, or program he hopes to sell to the administrator. This indirect method is at best dangerous unless suggested by the administrator.

Another step that may enter into salesmanship is also

limited in its application. Some administrators like some others of us are temperamental. A few of them may have a reputation for "turning down" proposals when they are in a negative state of mind. If experience proves that this is the case, the teacher should prepare one or two minor proposals to present first for approval. Or this preliminary step may be taken by asking a question or two, seeking his advice, or presenting a problem for suggested solutions. By the time this "feeling out" period is over, the teacher senses the administrator's present state of mind. If he is unreceptive, the major proposal is withheld until a more auspicious time. This step in salesmanship should be used with caution by new teachers until they can somewhat accurately interpret the administrator's state of mind.

QUESTION

What steps would you take in selling a program of physical education to your administrator?

Office etiquette. Most of us are embarrassed for an acquaintance or friend if he is unintentionally discourteous. Some of us may recall with chagrin an occasion when we inadvertently broke some rule of social behavior; and some of us have experienced that feeling of uncertainty that accompanies a lack of information as to "what to do next" in social situations.

Teachers who have not worked in offices or are unfamiliar with office work may overlook the importance of knowing the accepted practices in office decorum. Yet, the office secretary and the administrator are likely to form an opinion of the teacher's social background from the way he conducts himself in the office. A lack of knowledge regarding proper office decorum is an excuse, but it is a somewhat embarrassing one for a teacher to have to admit even to himself. What are some of the practices that should be observed?

Arranging the conference. To mention the necessity of and

procedure in arranging the conference may seem rather elementary to the mature teacher. Yet it seems advisable because school administrators report that many beginning teachers completely overlook the necessity of making appointments.

The teacher should record the *hour, day, date, place,* and *approximate length* of the appointment at the time it is arranged. The point is to be emphasized that keeping such an appointment is obligatory and contractual, although the superintendent or principal may be unable to keep the appointment. This act is permissible for them, but it is not permissible for the teacher to break the appointment except under extenuating circumstances. The appointment data should be recorded in such a way that there will be no slip-up. Many experienced teachers record such data in a date book as well as on the desk calendar.

A close relationship between the physical educator and the school principal exists in some schools. Many formalities such as arranging the conference might appear to be unnecessary in small schools. Personal friendship is no reason for intruding upon one's administrator unexpectedly, even though he is gracious enough to lay aside his other work for an unannounced conference.

Arriving on time. Teachers should arrive at the appointed place of meeting, usually the administrator's office, a minute or two early. It is suggested that the school time-system be used as the basis for appointments, so as to avoid committing that difficult-to-overlook breach of etiquette, being late. If the teacher arrives a few minutes early, the conference may begin earlier than planned if the administrator is ready. They then may either spend a longer time discussing the proposed program or complete their discussion at an earlier time than planned and both be free to return to their respective duties.

Upon entering the office, the teacher makes his business

known to the secretary or office attendant. Usually, he will be asked to be seated. At any rate, he refrains from wandering about the room. If it is necessary to wait a few moments, this time can be used to review his "approach," his proposals, or in simply relaxing.

Appearance. The teacher, except in unusual cases, should be dressed in street clothes when appearing for the conference. A gymnasium costume may be the physical educator's "costume of work," but it is not the accepted costume of the conference room. Psychologically, it places the physical educator at a disadvantage. It also may cause the administrator some embarrassment, particularly if unexpected guests arrive.

In the office. When shown into the administrator's office, the teacher remains standing until asked to be seated. If the conferee is a man, he remains standing until the administrator is seated if the latter is standing. A woman may be seated unless she wishes to show her respect by waiting for the administrator to be seated. In the case of a male conferee, after he is seated he may place his hat on the floor near his chair if no hatrack is provided in the outer office, and if the administrator does not offer to take care of it. In any case, hats, coats, umbrellas, and other personal belongings are not placed upon tables, desks, chairs, or other office furniture unless such a request is made by the administrator.

The teacher avoids lolling or sprawling in his chair. On the other hand, he avoids a stiff "West Point" sitting posture. He avoids placing his feet, hands, or elbows on the office furniture. If and when he is standing, he should not lean against the chair, desk, or other office equipment.

During the course of the conference, the teacher guards against absent-mindedly glancing at papers and correspondence that may be in view on tables or desks. He avoids nervous mannerisms that tend to detract from what he is saying, or, worse yet, those that disturb the administrator. If a telephone call interrupts the conference, the time should be

used in looking over one's copy of the proposed program, or in planning the next step in the discussion. At any rate, one does not listen to the telephone conversation.

Throughout the discussion the conferee keeps his voice modulated, even if situations tend to make him emotionally upset. Lack of poise is a sign of lack of confidence, a feeling of defeat, or at least a sign of being on the defensive. A loud voice is no substitute for logic and good salesmanship. The teacher avoids talking "out the window," for this is one sure way of making points lose their forcefulness. It is tactful and courteous to avoid listening "out the window." As a rule, one looks at the person who is speaking.

Leaving the office. The conferee remains alert to any signs, conscious or inadvertent, made by the administrator signifying that he is becoming fatigued, irritated, restless, or wishes to conclude the conference. Often it is the better part of wisdom to retire when it appears that the administrator's attitude has become or is becoming "negative." In such a case, the teacher might suggest that he knows the administrator is busy and perhaps they might continue the discussion at another time; or he might tactfully switch the subject of conversation to something he knows is of special interest to the administrator and thus tactfully lead to a conclusion of the conference. If the administrator should suggest another conference, the teacher readily accepts the proposed time and place.

At the conclusion of the conference, after thanking the superintendent for his time, thought, and suggestions, the teacher's leave-taking should be brief and definite, without being crudely abrupt.

QUESTION

What do you consider the most important factors in office etiquette?

Returning to the beginning of the conference, the teacher will have prepared and developed his approach before the

conference begins, assuming that the administrator is more or less sociable. If he is the abrupt, get-down-to-business type of person, the only approach is to present the proposed program in a way that will appeal to the administrator's system of values. In dealing with the first type, there are two preliminary steps.

THE APPROACH

The *fifth* step in salesmanship is called "the approach" because it serves the purpose of finding a way of reaching the customer. No approach *per se* is used in dealing with the abrupt, lay-your-cards-on-the-table type of administrator. However, most school administrators prefer the teacher to lead up to the business at hand by a preliminary conversation on a topic of interest. Most superintendents and principals recognize this as a more skillful technique in personal relationships and prefer it to the blunt, state-your-business-at-once technique. The approach consists of two steps.

Appealing to interests. The *first* step in the approach is based upon the information gained through step no. 2 in Salesmanship—namely, to find out the customer's cherished interests, beliefs, and hobbies. Obviously this may require some preparation. It matters little whether the administrator's interests are antique glassware, mystery stories, or new fads in educational terminology; the teacher who has something to "sell" should be prepared to ask intelligent questions and make appropriate comments. Most of us enjoy talking about those things with which we have closely identified ourselves. Furthermore, we judge a person favorably who can talk with us on these favorite topics.

Bridging the gap. As the approach progresses, the teacher remains alert for an opportunity to guide the conference into channels that will lead to the introduction of the chief purpose of the conference. The length of the approach depends upon (1) prearranged length of the conference, (2)

length of time it will take to discuss the business at hand, (3) the type of man who is across the desk, and (4) the psychological situation. This latter point refers to such factors as the interplay of personalities, the degree of receptiveness which the administrator seems to evidence, and the strategical moment when the topic of discussion can be changed from the administrator's interests to the purpose of the conference.

This change must be made with *finesse* in order to avoid an abrupt break between the two stages of the conference. If a psychological gap occurs, the claimed values of the approach are minimized or lost altogether. The ability to make the conference flow smoothly from the approach to the presentation depends upon the ingenuity, experience, and alertness of the teacher. The teacher of physical education should not find "bridging the gap" so difficult as some academic teachers do. There is a natural sequence from a discussion of interests and hobbies, to leisure-time or extracurricular activities, to physical education.

QUESTIONS

1. What are the major interests of your administrator (or the instructor of this course)?
2. What *detailed* steps would you take in a conference in leading from the approach to the presentation?

THE PRESENTATION

We have now reached a crucial point in the conference. As in the case of the very busy type of administrator, the teacher must have his "case" at his finger tips. In general, the following steps represent a psychological presentation of a proposed program of physical education, as the product to be sold.

Larger purposes. As a rule it is advisable to begin the presentation of a proposed program by discussing the larger purposes of physical education. These purposes should be

stated in terms that conform to the administrator's educational policies and purposes and should be presented in rather brief form. Occasionally, an administrator's concept of education does not include the emphases being made in physical education today. In such an instance, the teacher of physical education avoids clashing with the administrator over these basic ideas. Rather, he emphasizes the major purposes that are in agreement with the beliefs of the administrator.

Most men agree on some major issues. For example, all educators agree that the child should be given the best type of education possible. Most school administrators and teachers agree that the child needs physical activity. Few indeed are the school administrators who disagree with all of the larger purposes of modern physical education. If the administrator disagrees on one or two of these purposes, the circumspect teacher of physical education emphasizes those upon which there is agreement. The teacher should also avoid discussion of minor issues, at the outset. Minor issues represent an area in which controversy flourishes.

Major advantages. The physical educator is prepared to progress from the larger purposes of physical education to the major advantages of his program. For example, he quickly shows: (1) that the program is divided into the three seasons; (2) that the activities progress in difficulty and interest throughout the year in one grade; (3) that there is "progression" from grade to grade; (4) that there are possibilities for integration with other areas of the child's education such as history, music, health instruction, and geography; (5) that there are lead-up and carry-over opportunities from grade to grade, from the physical education class to the intramural program, recess, and vacation periods; (6) that there are opportunities for developing proper attitudes as well as skills and organic vigor; (7) that individual differences are taken into account; and (8) that a testing program is pro-

vided. These are to be considered only as examples of some points that may appear to be advantages to some administrators.

Anticipating objections. The teacher of physical education should anticipate objections to the program that may be raised by the superintendent. He should be aware of possible unavoidable weaknesses in the program. He not only anticipates them but plans effective ways of dealing with objections, weaknesses, and disadvantages. It is assumed that the teacher has constructed the best possible program, in terms of the local situation and the principles of education and physical education. But no program is perfect. The physical educator must anticipate the specific ways that the program fails to "measure up" in the mind of the administrator and be ready to deal with them effectively, without antagonism.

One way to prevent the emergence of negative reactions is to avoid such areas of discussion. Let us suppose a teacher is planning to present a modern program of physical education to a superintendent who considers the program weak because it lacks training in discipline (of the drill-sergeant type). The teacher should try to avoid a discussion of discipline if possible. An attempt should be made to limit the discussion to those values related to organic vigor and other values related to various types of skills. It might be well to avoid a discussion of the social values of the program because this might suggest discipline to the administrator.

Reversing questions. If the superintendent injects questions on points that the teacher of physical education attempts to avoid, the latter might try reversing the question. For example, the superintendent may ask: "Where in this program do the pupils receive training in discipline?" Such a question might place the teacher on the defensive. However, having anticipated such a question, the teacher might decide to answer it by a tactful question. For instance, he might say: "Would not the pupils receive satisfactory training in

discipline in the *obedience* to game rules, in *having to follow out* specific assignments in sports, in *having to master* the definite knowledges and skills, in *having to conform to* the routines of the locker room, in *'falling in'* at the time of roll-taking, and in correct *response to commands* in marching tactics?" The italicized words are used to yield implications of the type of discipline in which this superintendent believes. The question asked by the teacher suggests an affirmative answer. Words like obedience, rules, following out, conforming to, mastery of, and response to command are the sort of experiences in discipline which this superintendent supports.

Answering questions. Let us assume that the teacher, in anticipating the administrator's objections, decides to answer his questions rather than use the "reverse question" technique. In answering questions it is also possible to show the administrator that the proposed program conforms to his ideas (if it does). For instance, in answer to the administrator's question mentioned above, the teacher might mention the specific ways that "discipline" is accomplished.

As a salesman, the young teacher must understand that it is not always necessary to answer questions directly. For example, the administrator might ask, "Does your program 'discipline' the pupils?" Obviously the direct answer is "No," because the teacher believes his program should emphasize the development of self-discipline. Knowing the administrator's belief in formal discipline, the teacher desires to avoid both a controversy and giving the impression that the program is weak in this particular area. It is suggested that the teacher should avoid saying "No" if he believes it jeopardizes the acceptance of the program. Rather, he might mention the ways in which the program controls the conduct of the individual, in addition to the training in discipline mentioned earlier. It is to be clearly understood that this suggestion is made not for the purpose of deception but to illustrate two

points to the young teacher: *first,* that direct questions do not demand "yes" or "no" answers, and, *second,* that a good program of physical education can be shown to contribute to areas considered valuable by most educators.

An interesting discussion on the controversial topic "Discipline" may be had between the teacher and the administrator. The point being made here is that such a discussion should come at a time when the former is not trying to secure the latter's approval of a program of physical education. There are appropriate and strategic times and places for the discussion of controversial issues, but the "sales situation" serves another purpose.

Being specific. After discussing the more general purposes and advantages of the program, the teacher is now ready to progress to a study of proposed activities. The teacher is prepared to discuss any one of these activities and to justify offering them. He keeps in mind that in this discussion he must use specific, meaningful (to the superintendent) examples and terminology. He might make use of the evaluation given a certain activity for a particular grade by LaPorte's National Committee [1] based upon many years of research, or he might justify his selection of an activity by mentioning the percentage of state, city, or town courses of study in which the activity is recommended for a given grade. Or the teacher may decide to fortify himself by being prepared to discuss the outcomes and value of the activity in terms of organic vigor, specific skills (recreational, safety lead-up, or carry-over), and specific social acquirements. In brief, he is prepared to give authentic, substantial, specific data justifying or explaining the content and arrangement of the program.

Avoiding "No." The teacher should be alert to any continued negative attitude on the part of the administrator as

[1] LaPorte, William R., *The Physical Education Curriculum.* Los Angeles: The Carlson Printing Company, 1938.

The Presentation continues. If such an attitude exists, the teacher should not press the issue of gaining official approval of the program. Rather, he should offer to revise the program in terms of the discussion or suggest another conference. He should avoid forcing the administrator to reject the program or forcing him to suggest that revisions be made. That is, he should be alert and sensitive to the wishes of the administrator and either comply or find a way to have his proposition reconsidered.

Closing the conference. If the program is acceptable to the administrator, official approval should be secured at the earliest possible time during the conference without forcing the issue. After approval is secured, the conversation may be changed to other topics, the administrator's interests, for example, or he may wish simply to "talk physical education." In any event, the conference should be closed in such a manner that when the teacher desires another conference it is granted without hesitation. The inference here is that the conference should close on a topic that is agreeable to the administrator.

PERSUASION [2]

During the progress of a conference, the situation may demand techniques of persuasion. All successful persuasion is based upon pertinent information about the person being persuaded. This information yields cues as to the approach and appeals to make. The text by Graves and Bowman is especially recommended to the teacher who faces the task of persuading his administrator. An outline of some of the techniques of persuasion are:

Favorable attitudes. The teacher should secure favorable attitudes toward the proposal or part of it, whether it be an activity or the entire program. This securing of favorable

[2] Graves, H. F., and Bowman, J. S., *Types of Persuasion,* entire book. New York: The Cordon Company, 1938.

attitudes includes the desirability of building favorable attitudes toward the proposed program prior to, as well as during, its presentation.

Special desires. The teacher should satisfy one or more special desires of the administrator. That is, the administrator should be shown that the program will bring favorable publicity to the school, be popular with members of the community, increase his prestige, be a "progressive" move, or assist whatever his special desires may be. Realizing wants, satisfying self-interests are the strongest appeals one can use in persuasion.

Stimulate interest. The teacher should stimulate interest in the proposed program. The administrator cannot help being interested in the program if he feels that some of his special desires are to be realized. Beyond that, the teacher of physical education appeals to "reason," "common sense," "sense of justice," "welfare of pupils," and similar appeals. Most men like to be regarded as having such qualities. They therefore are interested in ways that enable them to appear to have these characteristics.

Concrete examples. The teacher should use specific, concrete information. In persuasion, one's points should be exact and explicit, not vague and general. For example, one would avoid saying, "This program will provide organic vigor." Rather he might say, "Such activities as handball and hockey will develop strength and vitality in James Smith, Bessie Jones, and the other 1,298 pupils in our school." The latter type of information produces mental pictures for the administrator.

Adaptation. The teacher should adopt an intelligent presentation; that is, one adapted to the peculiarities of the man being persuaded. It means sensing the degrees to which the administrator agrees and objects to the proposals. If he is critical, ideas should be stressed upon which it is known he is in agreement.

GUIDES DURING CONFERENCES

We have been emphasizing the ways that teachers may sell their ideas to administrators. This emphasis does not deny that worth-while revisions in the teacher's proposals might not well be expected. The following list of guides portrays the conference as a medium for improving a proposed program of physical education. The list also includes suggestions of advantageous conduct and attitudes during a conference with a school administrator.

1. Most good thinking is cooperative. The administrator may make valuable suggestions completely overlooked by the teacher.
2. Avoid "high pressure" methods. They usually stop cooperative thinking and often carry an aftermath of dissatisfaction and even resentment.
3. It is seldom necessary or wise to make a proposal on a take-it-or-leave-it basis.
4. Ideas and programs should be open to the searchlight of practical conditions and existing circumstances.
5. Emotional outbursts are not discriminatory and are often repercussive; that is, they destroy the "good" with the "bad" ideas; they destroy respect and confidence.
6. Best results are sometimes secured after a period of thinking-it-over. Be alert to suggestions for another conference rather than permit a negative decision to be made.
7. Bias and prejudice dwarf good judgment and eliminate clear thinking.
8. Demonstrate an appreciation of the administrator's problems and be prepared to make suggestions for meeting them through your proposed program.
9. Compromise may not always solve problems, but sometimes "a half-loaf is better than none."
10. If a negative decision is imminent and unavoidable, start building for the next time. Accept defeat gracefully. If an affirmative decision is made, start building for the next conference on some other proposal. Accept victory gracefully and appreciatively. "Keep the door open" in any case for subsequent conferences.
11. If there is to be a second conference on the proposed program, save some "ammunition" for it. Keep something in reserve.

a. Critically evaluate the steps made in the first conference.
b. Reconsider the administrator's kinds of values, his ways of thinking, his standards.
c. Put yourself in his place with reference to present and future events and conditions.

12. If a proposal is practical, applicable, and desirable, there is some way the administrator can be "sold." How?

13. Successful salesmanship is sometimes performed by previous weeks of building ideas, suggestions, hints, needs, and values. The final step, the conference, is merely consolidating these items and securing definite approval.

14. If the final decision is unequivocally in the negative, "don't cry over spilt milk." Conserve energy and thought by beginning to build for greater confidence. Start building a program that eliminates the weaknesses found in the original one.

15. Negative decisions are subject to time and conditions. Administrators are usually ready to reconsider.

16. The technique of securing favorable reactions to a proposal demands as much practice as any skill. It takes ability and ingenuity to "carry your message to Garcia."

17. Learn to disagree tactfully and courteously, if disagreement is unavoidable. Allow the other man his point, then submit your suggestion as a possible supplement to his.

18. When immediate action is essential, don't wait—act now.

19. Avoid expecting the acceptance of a proposal if it necessitates the breaking of administrative policies.

20. Although a proposed program may be a major issue, it should be obvious that the teacher sees its relative importance and value in the whole school program.

QUESTIONS

1. What steps would you take in presenting a program to your administrator for his approval?

2. Do you believe it is possible to plan previously each detailed step in The Presentation?

3. What items or steps in this chapter are most helpful in aiding the teacher to become a better salesman?

THE PUBLIC SPEECH [3]

Salesmanship in physical education includes not only the intelligent selection and application of certain principles governing conferences and conversations but also public speaking. Teachers of physical education usually encounter more occasions when it is necessary to address the school assembly, the P.T.A., a service or businessmen's organization, or such groups as the American Legion than do most teachers. The teacher should grasp every such occasion as an opportunity to sell physical education. If a severe illness or other equally justifiable excuse renders one unable to accept an invitation to speak, be prepared to suggest someone who will creditably sell physical education.

A dozen steps taken previous to the speech preparation. When arrangements are made for the talk, make certain of: (1) the title of your speech; (2) the number of other speakers and other program items; (3) the titles of the other speakers' talks and the nature of the other items on the program; (4) the total length of time for the entire program and for your address in particular; (5) the nature, age, range, type, and expected number in the audience, and their general knowledge of the subject of your talk; (6) the environmental setup (this includes the approximate size of the room, whether you will speak from a platform or from the floor, even the types of seats provided for the audience, and whether or not a loudspeaker is to be used); (7) the sponsors and purpose of the meeting; (8) the hour when the meeting is to begin; (9) your sequential position on the program; (10) the date of the meeting; (11) the address of the meeting place; and (12) any rules or conventions of the sponsoring group that may affect a public speaker, such as question-asking by members of the

[3] Jesse Feiring Williams and Clifford Lee Brownell, *The Administration of Health and Physical Education*, Third Edition, pages 404–410. Philadelphia: W. B. Saunders Company, 1946.

audience. In most organizations certain topics are taboo, such as religion and politics. It is not always possible to secure all of this information before beginning to prepare an address or even before giving the talk. However, the information gained from taking the twelve steps renders the speaker better able to prepare and give a good talk.

The address. 1. Some of the information gained in the preliminary steps should indicate the audience's general knowledge of and attitude toward the subject of the speech. Such information partially dictates the approach to be made by the speaker. For example, let us suppose the title of the address is: "The Values of Physical Education." Let us further suppose the audience is to be a group of businessmen who know little about physical education and who are indifferent toward it. The approach to the subject in this case would be quite different from that given to a group of professional colleagues. The speaker has one of three aims: to explain, convince, or move to action. The background and attitude of the audience give cues to the speaker as to how he can best accomplish his purposes.

2. The type of audience also indicates the kind and number of illustrations, the type of vocabulary, and the amount and degree of thought-provoking content to use in the speech. The degree of simplicity or complexity of presentation and the general level of difficulty of the content are also largely determined by the type of audience. There are seven types of vocabularies according to one's audience: *poetic, learned, literary, common, colloquial, illiterate,* and *slang.*

3. Most teachers are not past masters in public speaking. It is strongly suggested, therefore, that for talks before nonprofessional groups, the teacher (1) divide the talk into two or three main points, with points and subpoints under each main point; (2) write out the speech in complete form, from the recognition of the chairman to the last word, including anecdotes and illustrations; (3) read over the written speech

several times but do not memorize it; (4) prepare an outline of the talk from the written speech which can be typed or printed on a few small cards about 3 inches by 5 inches in size (Some speakers prefer a smaller and some prefer a larger sized card. It might very well be that this outline is dissimilar to the outline made at the outset.); (5) practice giving the talk, using only the cards as a source of reference; (6) compare the quality of grammar, colorfulness of terminology, and soundness of ideas used in step 5 with those appearing in the written form of the speech; and (7) practice giving the talk before a mirror, again using only the cards. To the teacher who has had some successful experience in public speaking, steps (5), (6), and (7) may be unnecessary.

4. If there are to be other speakers or items on the program, thought should be given to those parts of the speech that may be abbreviated or eliminated. As all experienced public speakers know, there are occasions when it becomes appropriate, if not necessary, to give less time to a speech than the amount of time allotted when the arrangements were made. It might as well be emphasized here as later that *no public speaker has a right to occupy more than his allotted time.* It is unnecessary, discourteous, and inexcusable. A speaker takes longer to deliver an address than to give it during practice. During the actual address he usually talks more deliberately (not over 200 words per minute to a large audience), pauses for emphasis and effect, and not infrequently includes a new idea. Consequently, while practicing, the talk should take from two to four minutes *less* than the time allotted. Neither during the practices nor during the address should the speaker try to give the speech in an allotted time by greatly increasing the tempo; it is far more effective to deliver fewer words and deliver them well. Seldom, if ever, agree to talk longer than twenty minutes.

5. Speakers are often given the opportunity to select the titles of their respective addresses. It is strongly suggested

that speakers give talks on subjects that are well known to them, topics that are very meaningful to them. Familiarity with and belief in a subject is one of the most fundamental forces in effective speaking. Some of the most gripping, most interesting, most lasting talks are given by persons who can boast of only a high school education, if that; who have never had any help in public speaking; and who accept the fearful task with trepidation. But they know intimately what they are talking about and believe implicitly what they say. If the speaker has an opportunity of selecting the title of his speech, it should be so worded as to (1) arouse curiosity, (2) be of interest to the audience, (3) be concrete, (4) be concise, and (5) be attractive. Titles are sometimes worded in question-form, as, for example: "Is Physical Education Valuable or Valueless?" Alliteration is sometimes used with effectiveness, as: "Pitfalls and Peaks in Physical Education"; or: "Peaks and Pinnacles in Physical Education." Titles of talks sometimes are made attractive and interesting by using a word or term of special interest to a given group or for a given time. For example, a talk before a local chapter of Rotary International might be: "Physical Education, An International Language." At the present writing such a title as "The Balance of Power in Physical Education" would attract attention.

If a speaker is definitely and irrevocably assigned to and accepts a given title which, to him, is professionally "impossible," he has the speaker's privilege of using the title as a springboard to talk on a subject more closely related to best professional standards. For example, an organization may give a speaker such a title as "The Body Beautiful Through Physical Culture." One's first reaction might be to refuse tactfully to speak on such a topic. On the other hand, the opportunity to talk to this group, "educate" them, and sell the modern concept of physical education may be most important in this community. As salesmen and teachers we lead per-

sons "from where they are." One's second reaction might be to suggest tactfully a change in title, and this should be done if possible. If not, the speaker can accept the title and use it as a point of departure soon after the beginning of the speech. The rapidity with which the change is made and the degree of departure from the assigned topic depend upon existing circumstances.

6. In preparing the address one should keep his ideas tied to the experience and interests of the group. Continually keep in mind the one, two, or three main points of emphasis. Avoid using general, meaningless terms such as "an exciting experience" and "very important." Tell what happened that made the experience exciting; tell how and why it was important. Use concrete examples, definite terms, words that grip the senses of the individual. A definite term like "star-spangled men" stirs the imagination of the audience, while the general term "soldiers" may not. Avoid overcoloring and other forms of insincerity in vocabulary. Never feel it is necesary to "talk up" to an audience. The use of slang is acceptable to some audiences if it is definite, pertinent, and saves words.

7. Other ways of creating and maintaining the interest and attention of the audience include: (1) the suspended sentence; (2) increasing and decreasing the tempo or rhythm of speech; (3) increasing and decreasing the volume; (4) shock or surprise statements that are true; (5) use of broken rhythm; (6) leading up to your points even in anecdotes; (7) demonstrating feelings you wish to get across, such as enthusiasm; (8) keeping an alert carriage; (9) including all the audience by moving eye focus to various areas of the room; (10) changing weight and position of body as major changes are made in content of the speech; (11) making the talk forceful through exactness, accuracy, audacity, use of synonyms, short sentences; (12) using variety in inflection and intonation; (13) avoiding trite sayings; (14) avoiding a historical beginning;

(15) avoiding giving numbers verbally by using a chart, and, if possible, delaying displaying it until it is needed; (16) using jokes that are absolutely new or twenty years old; (17) in case of an interruption from any cause, when the speech is continued, going back to where the audience was mentally; (18) avoiding too many gestures—those you make should be meaningful and not too sweeping; and (19) smiling occasionally.

8. Here are some physical and physiological guides to effective speaking: (1) squarely face the audience; (2) keep the weight of the body divided chiefly between the balls of the feet, as this causes the speaker to lean slightly forward; (3) in gesturing by body-shifts, do not step backward, as it is a gesture of weakness; (4) never lean, grip, or rest on anything; (5) warm up the voice before speaking by swallowing, slowly opening jaws without opening lips, moving tongue, taking a deep breath with tongue rolled back and exhaling slowly through nostrils; (6) use tongue and jaws freely to secure good enunciation; (7) lower the voice and speak more slowly in a room with poor acoustics; (8) swallow when you start to get up to talk, not after you begin; (9) keep relaxed, for tightened muscles tremble; (10) use a pause between thoughts or sentences for breathing, as obvious and rapid breathing give impressions of being flustered; (11) project the voice to the individual who is farthest away, but do not "stretch" the voice; (12) do not stand too near the audience; (13) never look at the floor—if the next point is momentarily forgotten, looking up will give the impression to the audience that the speaker is thinking; (14) start speaking on a moderately full breath; (15) avoid "fingering" articles such as watch-chain, paper, pencil; (16) avoid starting speech with voice too low, for it lacks vitality and enthusiasm; (17) if hand gesture is given early in speech, use a relaxed hand; (18) avoid looking directly and consciously *at* persons in the audience; (19) avoid rapid shifting of eyes; (20) avoid tightening or pursing

the lips; (21) let the arms hang naturally and keep hands out of pockets; (22) "talk over" a husky throat—tipping the head slightly forward helps; and (23) if a loud-speaker is provided, take the cue from the chairman as to proper distance to stand from the microphone.

9. Any speaker should have in mind taking appropriate actions in the cases of such emergencies as fire, a member of the audience fainting, lights going out, and heckling.

10. Certain psychological aspects of speaking are helpful to even the novice speaker. Here are a few: (1) a too slow tempo of speech permits the audience to nap, makes them irritated, or creates a deadly, heavy atmosphere; (2) after being seated at the beginning of the meeting, get settled comfortably so as not to appear restless, and then make contact with the audience by looking at them; (3) in making contact think to yourself, "I like you folks, and we are going to enjoy this occasion"; (4) if possible, know before going on the stage where you are going to sit and, if there are several on the platform, look toward the chairman so as to know when to be seated; (5) on a platform, feet and legs are conspicuous, so make certain these are not moved about unnecessarily; (6) if the time is short, "hurry with leisure" and never look at the clock while on the platform; (7) if there are several on the platform, some of whom are strangers to the audience, including yourself, move to a slightly more alert position as the chairman is giving introductory remarks about you; (8) in no instance should a speaker move suddenly or abruptly; (9) never permit "failure thoughts" to enter your thinking, and if they threaten, keep the thought dominant, "Come on, folks, we are going to enjoy each other"; (10) avoid repeating a word or phrase, even an important one; (11) avoid "thinking hard" while you talk—the time to do this is during the preparation stage; (12) avoid using hackneyed words—stick with simple words with most audiences; (13) avoid overusing the personal pronoun and other symptoms of egotism; (14) avoid

using the outline too obviously, for the audience should think along with you, not with the outline; (15) when you "take the stage," take it with posture, manner, eyes, voice, and sheer will power without appearing to be overbearing or overaggressive; (16) a speaker gets favorable reactions from the audience if he expects them and works subtly toward that end; (17) if a speaker or two precede you, tie your talk in with some idea they have presented; (18) make use of any advantage you may have such as height or breadth; (19) never speak from a "leaning back" position or a half-facing position, as they antagonize; (20) persons are not won over or stimulated by scolding, so assume a pleasant although not an ingratiating attitude—be buoyant and enthusiastic; (21) if appealing to an audience, never use logic—rather, appeal by changing the tempo and by using words that stir feelings and appropriate mental images; (22) never slur over words, for if they are worth speaking they are worth hearing; (23) a gesture with head *and* hand is stronger than if either one is used alone; and (24) holding the head to one side is a postural attitude of weakness and loses direct audience-contact.

11. Many teachers are asked to give a vocational type of speech. Here is an outline that covers the important points: (1) the name of the vocation; (2) brief background of the vocation, especially the novel, attractive items; (3) opportunities; (4) compensation in money, satisfaction, and service; (5) possibilities of advancement; (6) length of season, if seasonal; (7) personal qualifications necessary for success; (8) education, training, and cost of equipment to get started; (9) health conditions; and (10) summary.

12. Occasionally, it is necesary to talk to audiences of a given age range. Shall we consider some suggestions for two special groups? (1) *Old persons:* Their length of years has probably given them wide experience. Most of them live in the past. A younger speaker should show a reverent attitude toward them, never mentioning the matter of age except

as the "wisdom of experience." Link the past with the present, omit mentioning the future, and make the present interesting. (2) *Children:* They are interested chiefly in their own interests. Do not assume a patronizing attitude toward them; be honest and understanding, and do not expect affection or attention. Variety is the watchword. Make a point, then tell a story, then let them do something. Let them cooperate with you; avoid "the rhetorical question." Keep the vocabulary at their level, use vivid words, do not become emotional, and make but *one* main point that is easily remembered.

13. Speakers should also remember such points as: (1) recognize the chairman by turning to him, mentioning his name or position, with a slight bow; (2) recognize honored guests if any are present; (3) do not thank an audience at the conclusion of your talk; (4) quote poetry sparingly, if at all; (5) do not wait for the applause to cease entirely before starting to talk; (6) if the program is overreaching the time planned for it, "cut" your talk accordingly even though you are the main speaker—for example, some of the outstanding speakers of the country have reduced a thirty-minute talk to three minutes rather than impose on an audience. *It is better to be remembered as having good judgment than to be remembered as being a speaker with poor judgment.* In any case it is better to leave the audience wanting more than feeling they have had enough.

14. A teacher sometimes is asked to serve as chairman of a meeting at which speakers will be introduced. Here are some guides: (1) make certain that the audience is being taken care of and that there are chairs enough for all speakers and guests; (2) inform speakers of any unusual circumstances or conditions such as poor acoustics; (3) secure exact titles of speeches from speakers and secure pertinent data about speakers who need introductions; (4) tactfully remind each speaker of the time allotted to him; (5) tell each speaker and

guest where he is to sit and the sequence of speakers; (6) it is better not to have speakers take chairs in the sequence in which they will be called on; (7) make certain you know how to pronounce *correctly* each speaker's name; (8) the chairman usually is the first one to walk on the platform if it is necessary for the speakers to walk to their places in full view of the audience; (9) start the meeting *on time*, or as soon after as good judgment indicates; (10) if there are several speakers, do not hesitate to begin if one of them is too late. (11) In introducing a speaker, be natural, not flowery; give the necessary data about him, including a pleasant reference if you know him, introduce him to the audience as one person to another, and thereby give the audience and the speaker something in common. If the speaker is a stranger, tell him something complimentary and interesting about the audience and then introduce him to them. (12) As the meeting begins, mention the occasion. In introducing each speaker, mention his name at least twice as reference is made to his special field, honors, or achievements. State the title of his speech and the pleasure you have in introducing him. Use a trite, formal phrase in the actual introduction, such as, "It is with pleasure that I introduce Mr. . . ..," as you turn toward him. As he advances, step slightly to the side and retire to your chair after he recognizes you. If the speaker to be introduced will probably receive hearty applause, withhold mentioning his name until the last. The chairman always thanks the speakers and if time permits connects the speech with the next one. At the conclusion of the meeting the chairman again thanks the speakers personally. (13) During the talks, the chairman gives strict attention to the speaker. In order to avoid the necessity of the chairman's being interrupted to take care of emergencies, he should have at least one person in the audience to handle such matters. The chairman should not show irritation at any disturbances during a speech, for this accentuates the matter.

15. Now that the frame which surrounds the address has been constructed, shall we discuss the outline of the address?

(1) *Introduction:* Memorize the first two or three sentences. The introduction should immediately make agreeable contact with the audience. Use "we" in the first two or three sentences. Attract their attention without being superlative. Appeal to their special interests. Lead them from there to the first main point.

(2) *The Central Theme:* Develop the main points logically and psychologically. Keep the talk "tied down" with concrete illustrations and references to their experiences. Keep the speech moving forward; *avoid getting lost on bypaths.* The first main point should be challenging, gripping, interest-holding. Let there occur a slight letdown just previous to the climax which comes at the close of the talk.

(3) *Conclusion:* The nature of this last step depends on the purpose of the talk. Sometimes one concludes the talk with an appeal, a call for action. If an appeal is not desired, a very brief summary is made of the main points, using new words and connecting the ideas again with the special interests of the group. In any event it is well to close the talk on a "high plane" rather than merely a drab, matter-of-fact ending. The last two or three sentences should be memorized and should be as carefully prepared as the beginning of the speech. Make the closing phrase definite. Do not turn to go to your seat until the talk is over, at which time a slight bow is appropriate.

SAMPLE TEST ITEMS

True-False

1. The principles of selling have no place in education.
2. A good program of physical education automatically sells itself to any community.
3. Confidence in the teacher is a factor in selling the physical education program to the school administrator.

4. A customer's interests are personal and therefore should be avoided during one's sales talk.

5. One good way to get a proposed program accepted by an administrator is to ask the P.T.A. to put some pressure on him.

6. Any teacher should be able to see his administrator at any time.

7. A teacher's conduct while in a principal's office is one index of the teacher's social maturity.

8. Regardless of other factors, a teacher who is conferring with his administrator begins the interview by talking about the administrator's hobbies or interests.

9. Most educators agree with the majority of physical educators on most of the large purposes of physical education.

10. It is impossible for a teacher to anticipate any of the objections an administrator might have to a proposed program of physical education.

11. In a conference, it is always better to answer a question than to reverse the question.

12. In mentioning the advantages of a proposed program, it is better to be general than specific.

13. The ability to persuade another person rests on no particular principles.

14. The teacher of physical education is an expert and should avoid permitting the principal to make suggestions to change a proposed program of physical education.

15. The teacher of physical education should develop public-speaking ability.

16. Effective public speaking is related to the speaker's belief in and familiarity with his subject.

17. If a speaker agrees to speak on a given subject, he should speak only on that subject.

18. Public-speaking ability is almost entirely acquirable.

19. If an emergency occurs during a public speech, the chairman of the meeting immediately should leave to take care of the matter.

20. Most speakers take more time in actually giving a talk than in practicing it.

21. Is it the duty of the educator to attempt to persuade people to improve themselves?

22. Does History teach us that forcing enlightened practices on people has tended to cause rapid and permanent improvement?

23. Is the great worth of Physical Education as a school subject universally accepted?

24. Is Physical Education easier "to sell" to the public than athletic sports?

Matching Questions (put number of concept in front of description that most nearly fits)

CONCEPT	NUMBER	APPROXIMATE DESCRIPTION
1. Persuasion		Appeal to interests, bridging the gap
2. Educational justification of salesmanship		Purposes, advantages, objections
3. Office etiquette		Social obligation and only means of permanent improvement
4. The approach		Being specific, avoiding "no," pleasant termination
5. Steps in salesmanship		Attitudes, desires, examples, adaptation
6. The presentation		Worth of product, interests and hobbies, presentation, place, approach

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7.

Fundamentals of Program-Building

"Sound plans lead to successful programs."

DOES THE teacher of physical education ever reach perfection? What teacher can afford not to work constantly toward better teaching? The teacher interested in better teaching is bound to be interested in better program-building. While this text does not pretend to present a comprehensive treatment of the construction of courses of study in physical education, it is obviously necessary to discuss at least the fundamentals of program-building which the teacher can use or with which he can cooperate.

Changes in courses of study are imminent as the purposes of education in American democracy are re-interpreted. Thousands of school systems are engaged in curriculum revision, as education is being made more meaningful and valuable to pupils and to society. There was a time when curriculum construction and revision were tasks assigned only to outside experts. Today teachers and laymen are actively participating in certain parts of this work. If the teacher is to improve instruction through what is taught, he must know through experience something about program-building. If the school is to serve best and its purposes to be understood by the community, laymen should participate in the program-building process.

In small school systems, the teacher of physical education

may believe that he might as well construct the program without outside help. Who else knows anything about or is interested in building a physical education program? One of the surest ways to enlist a person's support of physical education is to stimulate his interest in it by inviting him to perform some task which he can do well and which will bring credit to him. For example, in the small school the music-art teacher might well serve on the course of study committee, not only because physical education and these two "subjects" are easily integrated but also because the physical education teacher and the music-art teacher can be mutually helpful throughout the year. The teachers who serve as deans of girls and boys, respectively, should also prove to be valuable members of the committee. Smaller schools are beginning to enlist at least the part-time services of a nurse or physician or both. At any rate, the teacher should ask a physician of the community to serve on the committee. Incidentally, this step is often the beginning of the end of the type of "doctor's excuses" which the teacher of physical education considers to be invalid. In addition, the community should also be represented through the P.T.A. and a businessmen's or service club.

In some small schools, the teachers of industrial arts and home economics are also included on the committee. Equipment and supplies may be made by the boys in the shop, and physical education costumes for both boys and girls may be made by the girls as a part of their home economics experiences.

The administrator is always included as a member of the committee but seldom attends meetings unless the physical education teacher requests his presence for a specific purpose. He should be *kept informed*, however, of the committee's progress and will be found helpful in suggesting ways of getting things done and in handling committeemen.

In some schools the initiative for revising the course of study in physical education will have to come from the teacher

of physical education. Assuming that he also desires to gain the support and cooperation of the school personnel and community for physical education and indirectly to "educate" them toward better programs of physical education, he may wish to take some preliminary steps. The following steps represent a concentrated outline from a comprehensive discussion by Caswell and Campbell [1] which is recommended to the teacher particularly interested in curriculum construction.

1. Prepare the school personnel and lay groups for the need of a new program of physical education.
2. Solicit aid of intra- and extraschool agencies and groups on the main committee or on subcommittees.
3. Select the main committee and subcommittees to cover various aspects of the work, e.g., administration, aims, collecting materials, editing and reviewing, special problems, advisory, and continual revision.
4. Select personnel of subcommittees according to their teaching ability, interests, experience, training, and other abilities.
5. Start subcommittees working in appropriate sequence so that the work of one will not "stymie" the work of another committee.
6. Let its functions and duties determine the size of each subcommittee.
7. Ascertain the costs of printing and mimeographing the course of study. Find which sum more nearly matches the money available for this purpose.
8. Determine and arrange for suitable meeting places and times for various subcommittees.
9. Ascertain the possibility of clerical assistance being provided for main and subcommittee meetings.
10. Ascertain the possibilities of teachers working on main and subcommittees being relieved of certain other duties.

General steps in constructing a course of study. A course of study in physical education may be described as including criteria for selecting pupil activities, the activities selected for attaining pupil objectives, materials helpful in such attain-

[1] Caswell, Hollis L., and Campbell, Doak S., *Curriculum Development*, pages 466–521. New York: American Book Company, 1935.

ment, and evaluation of outcomes. Consideration also is given to areas of integration with other related subjects or fields.

According to the expert opinion, a course of study is not too prescribed and limited.[2] The trend is away from a course of study being restricted to physical education alone for a given school level and toward an emphasis upon expansion in kinds of pupil participation. The term "pupil activities" includes helping select activities, setting up objectives, participating in such a way as to attain the objectives selected, and evaluating the results. The concept of the course of study in physical education is also broader today because, *first,* it provides for integration with other areas of the school program, and, *second,* it is beginning to mean the entire program of physical education, from the kindergarten through the senior high school. There does not seem to be unanimous agreement on all these points among writers of texts on the curriculum, but this should not be confusing because there is lack of agreement among these writers even as to the meaning of the words "curriculum" and "course of study."

The point being made and the point of view being emphasized, as presented by some of the writers, is that the course of study is not a rule-of-thumb blueprint but that it is becoming liberalized in scope, purpose, method, use, and application. With this partial escape from absolutism comes a less stereotyped concept of the steps to be taken in constructing a course of study. The following six steps with accompanying ques-

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[2] Caswell, Hollis L., and Campbell, Doak S., *Curriculum Development,* pages 448–455. New York: American Book Company, 1935.

Draper, Edgar Marion, *Principles and Techniques of Curriculum Making,* pages 17, 18. New York: D. Appleton-Century Company, 1936.

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tions for purposes of amplification constitute one way a course of study may be constructed.

1. *Backgrounds.* What is the history of and attitude toward physical education in this community, this school? In what tangible forms are the attitudes manifested? Why should a course of study be constructed or revised? Who is interested at present in this task? Who would be helpful in assisting in such a task? Does the financial condition of the school, the practical possibilities of increased facilities and equipment, the attitude of the school administrator and the community, and the possibility of more or a better trained staff justify the time, effort, and expense to be spent on the project? Who should serve on the main and subcommittees? What philosophy or philosophies of education are to guide the committees? What philosophy or philosophies of physical education are to guide the committees?

2. *Purposes.* What are the purposes of construction or revision in terms of the community, the school, the pupils, the teachers, and physical education? What is the general purpose or aim of physical education conceived to be? What are the purposes of the main and subcommittees? What are the major goals or objectives of physical education conceived to be?

3. *Analyses.* What are the needs, interests, abilities, potentialities, appreciations, and peculiarities of the children according to grades? Shall the answers to that question be the "best guesses" of the teachers responsible for these children, shall the answers be the "expert judgments" as found in the literature, or shall "direct observation" or "scientific studies" be used? Which of these needs, interests, and so forth should be immediately satisfied in each grade? Which can be deferred, and for how long? What activities seem to promise or to have proved best to satisfy the needs, interests, and abilities of each grade? Which activities seem best to match and challenge the ability of each grade?

4. *Syntheses.* What are the pupil objectives for each activity? Each grade? What areas should be covered in each grade? Emphasized? What philosophy or philosophies underlie the selection and synthesis of these activities, objectives, and materials? How shall the content of physical education be selected for each grade (teacher-selected, pupil-selected, or cooperatively selected units)? How shall the content of physical education be organized for each grade (topical units, "theme" units, significant-aspects-of-life units,

pupil-need units, pupil-purpose units, pupil-interest units, or, by the subject-matter division and allocation method, or perhaps by the stairstep objectives procedure as presented in Chapter 3? If the course of study is to be printed or mimeographed, what form should it take and what emphases should be made?

5. *Installation and evaluation.* After construction, in what manner shall it be introduced? Installed? What guides can be set up to help the teacher in the use of the course of study? In its criticism? Is freedom granted the teacher in the rate of installation? What checks are provided to insure best possible installation and experimentation? What help is given teachers in using new materials, activities, and methods? What criteria for evaluation are provided? How long is the experimental period?

6. *Continuous revision.* Who is responsible for initiating changes in the course of study commensurate with changing conditions and circumstances in the nation, state, community, and school? From what other sources are suggestions for revisions sought? What place does the teacher play in continuous revision? Are objective data or untested experience the basis for revisions?

QUESTIONS

1. How would you go about building a program for physical education?
2. Do you favor the inclusion of laymen on a committee whose purpose is to construct or revise a course of study?

Determining objectives. One of the most important steps in building a physical education program is the determination of objectives. It has therefore been selected for special, though incomplete, treatment. The teacher should be familiar with the methods of determining objectives so that he may be a more intelligent guide in helping pupils select and evaluate their objectives. The teacher also should be well informed as to the individual and social acquirements which pupils need and in which they are interested, and the approximate age or maturity levels when such acquirements may be expected to be attained by pupils. Harap[3] presents a

[3] Harap, Henry, *The Technique of Curriculum Construction*, pages 38–108. New York: The Macmillan Company, 1931.

detailed discussion of methods of determining objectives, of which only a bare outline is presented here:

1. Direct analysis of the natural activities of children.
2. Direct analysis of the social needs of the learner.
3. Secondary analysis of the needs of the learner.
4. Analysis of the needs of the learner in the opinion of competent persons.
5. Analysis of existing objectives as found in, or inferred from, curriculum studies, courses of study, and textbooks.

This list implies sources as well as methods of determining objectives. Other sources of objectives are indicated in Chapter 4.

Objectives and pupil experience. As we think of objectives in connection with constructing a course of study for physical education, it is necessary to develop briefly a few points mentioned in Chapter 4. The *first* of these points is that the objectives in a course of study should include more than the specific skills, knowledges, attitudes, and habits to be learned by the pupil by means of the activities selected by the teacher. This not uncommon conception of objectives has led some teachers to dodge the responsibility of setting up objectives. Why? If the activities are well taught and the pupils participate, will not the pupils rather automatically accomplish most of these objectives, whether or not they are set up? The point is that the course of study should intentionally provide and the teacher make possible certain experiences in addition to particular accomplishments ordinarily considered as objectives. These experiences might be considered by some leaders as more important objectives than the conventional concept of objectives. Reference is made here to experinces that provide opportunities for the pupil to *try out, receive guidance in,* and improve in such activities as *making decisions, planning, selecting, judging, evaluating, carrying responsibility, leading, following, choosing, succeeding, fac-*

ing failure with intelligence, meeting and solving individual and group problems, and the like.

The *second* point is related to the one just made. The course of study should include as objectives such acquirements as have just been mentioned in order that the pupil may experience more than merely repeating selected bits of life as lived and conceived by adults. Is the world today, the people in it and what they do, to be considered as a constant? On the contrary it is generally recognized by educators and intelligent laymen alike that the school must better prepare children to meet the conditions of their present and *future* lives, whatever they may be. This attitude places the emphasis not so much upon specific skills, knowledges, and so on, as upon planning, evaluating, selecting, and the like.

The teachers of physical culture and physical training of another day were little concerned with the attitudes being formed as the pupils of that day accomplished specific skill learnings. Nor does it appear that they realized that the activities and objectives of that day might not fit into other conditions of American life. It is all too apparent that one force still operating against a modern program of physical education is the accumulated and combined attitudes of adults against their experiences in school or college physical education. Another negative force in some quarters is the inertia of a program of activities constructed for the ideas of a people in other times and places.

A *third* point that needs to be briefly developed is that the pupil should be prepared not only for "the good life" but for its improvement.[4] Does "the good life" exist today for most pupils? For most teachers? The difficulty with "the good life," as it is commonly conceived in connection with objectives, is that it is a certain kind of life made up of certain

[4] See pp. 131–133.

agreed-upon types of behavior. This concept of "the good life" is like asking the pupil to run a hurdle race in which the manner of running, the length of the race, the construction and spacing of the hurdles are adult-controlled. On the contrary, is there not something to the point that life is "good" in terms of improved living? Does not "the good life" change with each person if he creates a better life for himself and those about him? To use the analogy, "the good life" is represented by the pupil who runs better, runs farther, runs with greater satisfaction over hurdles made and spaced by himself. One factor needs to be added: that these experiences be carried on under the guidance of the teacher who considers the pupil's efforts within the frame of reference, the experience of the race. And so again we see an emphasis upon giving the pupil opportunities to try out, evaluate, create, and select, under the guidance and interpretation of a good teacher. Gradually the pupil is led to expand and deepen his methods and criteria of evaluation. That is, the teacher not only helps the pupil interpret his efforts in terms of something better but aids him in gradually acquiring a basis for making such judgments.

Objectives and interrelationships. Good drivers of automobiles possess what the layman calls "split vision." That is, they have the ability to be looking "down the road" and at the same time see what is going on on both sides of the road. Coaches of sports have learned to recognize this peripheral vision as a desirable characteristic in their athletes. The program-builder must possess a type of split vision. He sees the objectives of physical education but he also sees the objectives of other school subjects which are near the periphery of physical education. He is interested in this latter group of objectives not only as they represent areas of integration but also as they serve as a means of better orienting physical education in the whole school program.

Many schools are attempting ways of insuring better inte-

gration, whether it be through the curriculum, teaching techniques, or administrative maneuvering. Subject-matter lines are disappearing.

It appears that tomorrow's teachers of physical education, and that includes those of us who are teaching now and will be teaching tomorrow, will need to have a considerably broader point of view founded upon wider fields of interests. This is the only way we can keep alive to interrelationships with other fields so that we can contribute as much as possible to the development of the individual. At the same time we cannot afford to lose our professional skill in the precise field of physical education. That is, because a teacher is broader in his interests and therefore better able to integrate his special field is no reason he should be less expert in his specialty; in fact, quite the contrary is indicated.

QUESTION

What are your present reactions to the major objectives of physical education presented in Chapter 3 as compared with your reactions at the time you first considered these objectives?

Restatement of objectives needed. The major objectives of physical education, several sets of which are presented in Chapter 3, appear to need re-interpretation for several reasons: *first*, because of recent re-interpretation of education in American democracy; *second*, because the present objectives fail to indicate the need for integration; *third*, because they fail to indicate clearly such important pupil activities as planning, selecting, deciding, evaluating, and taking responsibility; and *fourth*, because they fail to indicate the relationship between the major objectives of education and those of physical education.

There may be those who maintain that the major objectives as now stated by one's "favorite" authority are satisfactory. The major objectives of physical education as presented by any recognized authority are satisfactory for presenting his

concept of the major purposes of physical education, and for reflecting some of the ideas of his time. Yet, changed conditions and circumstances bring changed ideas, emphases, and demands. The restatement of the objectives of education recently made available by the Educational Policies Commission [5] demonstrates an alertness and sensitivity by the National Education Association to changed conditions and circumstances. A re-interpretation of the meaning and application of American democracy, the rapidly changing scenes on the socio-politic-economic stage, the recognized complexity of social living, the possible influence of modern life upon emotional adjustment, and the recognized unity of mind and body are a few of these changed conditions, circumstances, and ideas that are bringing about the "new education."

It is suggested that the major objectives of physical education, as they are related to the program of physical education, be restated because of such changes as are mentioned above and because of a changed education. It is suggested, *first*, that this restatement recognize the larger purposes of education to which physical education makes contributions. Present statements of major objectives of physical education may be interpreted in terms of the larger purposes of education. However, does the present *wording* of many sets of major objectives direct the attention of teachers too exclusively toward stated goals without showing the close relationship between them and the new larger purposes of education? Does it not appear that we need an ever-lengthening, an ever-broadening, an ever-deepening of our view of the purposes of physical education, as education unifies and integrates experiences for the expression of and development of the whole personality of the individual?

This question brings us to the *second* suggestion—namely, that the restatement of the major objectives of physical educa-

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[5] See pages 109–110.

tion should recognize the fact, place, need, and importance of integration. One of the difficult hurdles still confronting teachers of physical education is that too many administrators and too many academic colleagues still consider physical education one of the "special subjects." Might it even be true that too many teachers of physical education teach it as though it were a special, if not an isolated, subject? Many of those responsible for recent revisions of school curricula, for the purpose of better insuring unification, verbally testify that teachers of physical education have difficulty in thinking in terms of physical education as contributing to the common units of a core-curriculum. If the major objectives of physical education are worded so that integration is recognized or perhaps emphasized, would not teachers of physical education be more apt to realize that integration is part of their major responsibility? Can there be any doubt but that the integration of the individual's whole personality and the integration of that personality in social life are paramount needs in these days of confusion, insecurity, conflict, rapid social transitions, economic instability, and general ferment? Does it not seem *essential* that teachers of physical education should work toward contributing to the individual's emotional adjustment and social maturity quite as much as toward his organic vigor and acquirement of skills? That is, if the wording of these latter objectives remains as it is at present, is there not a tendency for us to work toward the accomplishment of these objectives as ends rather than using them as *means* that lead toward the larger purposes of life, such as self-realization, desirable human relationships, and civic responsibility?

A *third* suggestion is that this re-interpretation of major objectives of physical education recognize the need for the individual's being given an opportunity to develop abilities in self-direction and creativeness so that he may be enabled to improve himself and the social order in which he finds himself. The basis for this suggestion has been mentiond in con-

nection with the point that a course of study should recognize the importance of the type of self-development that comes from achieving, creating, improving, exercising self-discipline, achieving desirable kinds of recognition, promoting, deciding, judging, managing, planning, leading, following, initiating, developing, expressing, taking turns, socializing, carrying out orders, overcoming difficulties, respecting the rights of others, carrying responsibility, helping those less adept, and other such types of experience. Does this type of activity appear to be important enough to receive recognition in a listing of major objectives? Are these activities as worthy of accomplishment as the acquirement of recreational skills? Is it as important for the pupil gradually to acquire the ability to make wise choices, evaluate, create, and prepare against the day when he may contribute toward the improvement of the social order as it is for him dutifully to acquire those skills, habits, and knowledges which contemporary society decrees are necessary to get along in present-day social life?

Finally, it is to be unmistakably understood that these suggestions do not indicate that the re-interpretation of major objectives at this time should omit the outcomes commonly connected with physical education. Reference is made to outcomes described by such words and phrases as: "organic vigor," "wholesome, functional activity of organic systems," "physiological results," "satisfy those natural urges and drives in socially desirable ways," "normal functioning of the metabolic and nutritive process," "neuromuscular control," "skills for safety," "carry-over interest," and "skills for recreation." Without a doubt these are vital, essential, fundamental. The point of the three suggestions, regarding a re-interpretation of the major objectives, is to raise a question. It is this: Are not the proposed outcomes of physical education, described by the quoted phrases, valuable as they *lead toward and contribute to* the larger purposes of life and

education (if adding the last two words clarifies the meaning for some readers)? Would we be overshooting the mark if we stated that these commonly understood major objectives were of most value only as they functioned in contributing toward such a purpose as self-realization?

Are the answers to such questions too apparent? Is it obvious that the major objectives of physical education, as they are stated and interpreted at the present time, are to be projected and applied to the larger purposes of life? Judging from the way we teach physical education, judging from the vast majority of printed courses of study in physical education, and judging from the points of view expressed by hundreds of experienced teachers from two thirds of the states, the present wording of the statements describing the major objectives of physical education actually fail to encourage or enable us to see the wider, deeper, further implications.

Finally, let us consider a question regarding the use of the word "health" in a statement of the major objectives of physical education. There must be some controversy on the matter because some courses of study and texts mention the word while others do not. Many school principals and superintendents are confused if not incredulous when they are told: "Health is not an objective of physical education." Of course, some school administrators may be confused or incredulous about several aspects of physical education, including the newer program. Nevertheless, there is the justifiable question: "Is or is not 'health' a factor to be considered in a restatement of the major objectives of physical education?"

It seems reasonable to take the position described in such statements as: ". . . physical education should not be organized exclusively for health purposes at all. . . . The immediate danger confronting those who are fostering the present interest in health is that ill health may come from the efforts

to secure health." [6] Such a statement as: "Hence, physical education is not conducted in education for the purpose of health. . . ." might lead some readers to think that Williams takes the position that physical education does not contribute to health. Yet, he says: "Physical activity, if it has certain qualities, contributes to health. . . ." and goes on to point out that all experiences of a certain nature contribute to health for that matter. It is our interpretation of Williams' position that he is warning against: (1) setting up health as an end toward which to work; (2) conceiving physical education as limited to posture education, corrective measures, and the like; and (3) conceiving physical education as limited to health outcomes alone.

It would be difficult to defend the thesis that the program of physical education should be constructed and conducted in such ways that the health of the individual is ignored. If one assumes that health is "the quality of life that renders the individual fit to live most and serve best," [7] is not physical education partially interested in this? If we accept this comprehensive view of health, are "situations that are physically wholesome, mentally stimulating and satisfying, and socially sound" [8] selected with disregard for the individual's health? It therefore is our understanding that Williams recognizes that health is one of the outcomes of physical education, that physical education contributes to the health of the individual, that the program of physical education and the way it is conducted should consider, among other things, the health of the individual. It is necessary to keep in mind that we conceive health to include the various pseudo-categories, mental, emotional, and social, as well as physical.

The reasons for this discussion are threefold. *First*, we

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[6] Williams, Jesse Feiring, *The Principles of Physical Education*, pages 54–58 (1938). Courtesy of W. B. Saunders Company.

[7] Williams, Jesse Feiring, *Personal Hygiene Applied*, page 18 (1937). Courtesy of W. B. Saunders Company.

[8] Williams, Jesse Feiring, *The Principles of Physical Education*, page 302 (1938). Courtesy of W. B. Saunders Company.

have found many experienced teachers in many parts of the country who have interpreted Williams' position as maintaining that the program of physical education and the way it is taught are to *ignore* health considerations, implications, and outcomes. *Second,* some school administrators are confused by the point of view just mentioned and as a result assume still further biases against physical education. *Third,* since "health" is a larger goal than "organic vigor" and is more easily comprehended as being related to such larger purposes of life (and education!) as self-realization, desirable human relationships, and civic responsibility, why should not the re-interpretation of the objectives of physical education include a statement of the extent of the relationship between physical education and the individual's health? The conscientious effort, the literary gymnastics, and almost fearful avoidance which some speakers and writers demonstrate as they try to discuss the major objectives of physical education *without mentioning the word "health"* is astonishing and regrettable.

QUESTION

How would you re-interpret, reword, and reorganize one given set of major objectives so that they conform to the suggestions made?

Criteria for program-building. The construction of a course of study in physical education is facilitated if the person responsible has certain criteria to aid him during several of the steps in program-building. *First* of all, the program-builder might well consider the "principles underlying an American curriculum" as one means of viewing the general direction which the course of study should take. The following principles represent an interpretive outline of a more detailed and excellent statement by Dix: [9]

[9] Dix, Lester, *A Charter for Progressive Education,* pages 42–50. New York: Bureau of Publications, Teachers College, Columbia University, 1939.

I. The *design* of the curriculum should be:
   1. *General,* so that it is applicable to any individual within his abilities.
   2. *Comprehensive,* so that leadership and followership are developed; so that there is continuity from grade to grade; so that there is variety and flexibility.
   3. *Coherent,* so that personal interests in a given professional area will be seen as fitting into the general plan.

II. The *spirit* of the curriculum should be:
   1. *Modern,* adaptable to the world of today, with an eye to the future.
   2. *Functional,* related to the actual activities of the people.
   3. *Practical,* providing development in many areas.
   4. *Cooperative,* preparing individuals for social living.
   5. *Intellectually unifying,* providing unity from simple to complex learnings; between the concrete and abstract, between doing and thinking.
   6. *Socially integrative,* translating personal interests into similar interests as found in society.

III. The curriculum in *practice* should be:
   1. *Personal,* emphasizing the socialized individual's needs, interests, desires, and capacities.
   2. *Integrative,* providing broad learning opportunities and developing the individual as an integrated personality.
   3. *Active,* providing activities for healthy growth, including self-activity, opportunities for selecting, carrying responsibility, and the like.
   4. *Adventurous,* fostering self-initiated experiences that are courageous, adventurous, novel.
   5. *Developmental,* promoting continuous process of growth of many capacities, in many areas.

IV. The curriculum in *emphasis* should have:
   1. *Balance in capacities,* providing a balance with respect to experiences in skills, knowledges, attitudes, and purposes toward broad personal development.
   2. *Balance in experience,* providing experiences that promote a rounded development with regard to relationships with people and with the material things of the world.
   3. *Self-reliance.*
   4. *Creative capacity.*

5. *Personal enjoyment.*
6. *Vernacular competence.*
7. *Æsthetic interest.*

In spite of the fact that these principles were constructed for an American curriculum in the broader field of general education, they prove to be highly suggestive to the program-builder in physical education.

Let us now turn to a set of criteria constructed after years of work by many curriculum experts and involving thousands of courses of study.

The following outline of criteria is modified and taken from a comprehensively treated set of criteria [10] for evaluating a course of study. The original is recommended as invaluable to any person actively interested in program-building.

I. PHILOSOPHY

A. *Social philosophy.* The course of study should reflect a social philosophy that promotes "the ultimate aims of a literal democracy," should recognize the flexibility of society, and should serve as a force in social improvement.

B. *Educational philosophy.* The course of study should show that the educational philosophy upon which it is based is founded upon the social philosophy and is reflected throughout all parts of the course of study. It is understood that the aim of education is to help "the individual to become increasingly self-directive in improving society through satisfying individual growth."

C. *Principles of learning.* The course of study should show that it is "based upon the soundest principles of psychology."

II. CONTENT

A. *Authenticity.* The content of the course of study "should be accurate and authentic, based upon the most scholarly findings and writings."

B. *Utility.* The course of study should be so worded that it "can

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[10] Bruner, Herbert B., *Criteria for Evaluating Courses-of-Study Materials,* pages 110–118. New York: Bureau of Publications, Teachers College, Columbia University, 1939.

be utilized in the solution of life problems" related to physical education.

C. *Adequacy and significance.* The course of study should adequately cover those parts of human activity related to physical education that significantly contribute to "the welfare of society and the growth of the individual at his level of maturity."

D. *Organization.* The course of study "should be organized around major areas of experience so that the pupil may be assisted, first, in discovering and developing promising immediate interests, second, in identifying and satisfying those needs which have value, and, third, in securing an enriched experience."

III. ACTIVITIES

A. *Pupil purposing.* The course of study "should provide for the real purposing of the pupil in order to stimulate" him to desire to initiate his own plans, to accept responsibility, to exercise control over experiences and "the process of development and evaluation of results," in ever-increasing amounts and toward higher levels.

B. *Interests and needs.* The activities in the course of study should satisfy the pupils' needs, be based upon their interests, so that optimum growth may result.

C. *Social values.* The activities in the course of study should lead the pupil to become a more valuable member of society by meeting the demands of an ever-changing social order.

D. *Reality.* The activities in the course of study should be selected from situations in real life which satisfy his needs because they are interesting and important to him.

E. *Variety.* There should be a sufficient variety in the activities in the course of study to lead to the individual and social development of the kind of pupil implied in the sections above.

F. *Approach.* The approach to the activities in the course of study should be of such a nature that each pupil is challenged "to desire to initiate and carry to its conclusion the projects which the group has planned."

G. *Culminating activity.* The culminating activity should serve as a means by which each pupil accomplishes the goals selected for himself, and this in turn will help the pupil "relate and put into the most valuable and meaningful patterns" the activities used during the entire period of work.

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IV. EVALUATION OF PUPIL'S WORK

A. *Purpose.* Evaluation serves three purposes: first, to satisfy the teacher's desire for thoroughly understanding each pupil; second, to provide bases for suitable changes in learning opportunities and methods to meet individual differences; and, third, to determine the degree to which objectives are realized and accomplished.

B. *Variety.* There should be a variety of evaluating devices and methods which provide for pupil self-evaluation as well as teacher estimates of the pupil's work.

C. *Validity.* The validity of the evaluation process should be determined by: first, "the degree to which this evaluation approximates natural conditions; second, the degree to which the individual accepts the need or purpose of evaluation and participates and cooperates in the process; and, third, the degree that the various aspects of behavior are evaluated in relationship to other aspects of behavior which emerge to form the whole experience."

D. *Areas of growth.* Evaluation should include measurement of the emotional and social as well as the physical and mental.

E. *Interpretation.* The course of study should include aids in the interpretation of the data in terms of the whole child and with recognition of the limitations of the data.

In order to assure a *balanced* program of physical education, it is suggested that the program-builder give consideration to the areas, aspects, or categories of physical education which should be covered by the course of study. These categories or areas have been presented by Williams.[11] They are as follows:

1. *Individual gymnastics.*
2. *Play,* games, sports, athletics, equitation, aquatics.
3. *Dancing and dramatic activities,* festivals, pageants.
4. *Self-testing activities,* combat, self-defense, stunts.
5. *Fundamental skills,* running, jumping, throwing, climbing, hanging, lifting, carrying.
6. *Out-of-door camping activities,* hiking, trailing, hunting, fishing, camping, wandering.

[11] Williams, Jesse Feiring, *The Principles of Physical Education,* page 232 (1944). Courtesy of W. B. Saunders Company.

QUESTIONS

Select any course of study in physical education. Apply the various sets of criteria to it. Apply them to other courses of study. Compare your temporary appraisals with those of other persons.

A suggested program. In December, 1927, the College Physical Education Association appointed LaPorte chairman of a committee to formulate a comprehensive, graded program of physical education which would seem best to fit conditions and circumstances throughout the country. The committee is still at work but in no sense regards the program resulting from their researches as inflexibly a national program; rather, it is to be considered as a basic guide in program-building. The committee recognizes that local conditions prevent a universal adoption of the proposed program. The following outline is an abbreviation of the program as it appears in the original: [12]

I. PRIMARY GRADES (1–3)

1. *Rhythmical activities,* such as Farmer in the Dell, Looby Loo.
2. *Mimetics and story plays,* such as imitations of animals, mechanical objects.
3. *Hunting games,* such as cat and mice, hounds and rabbit.
4. *Relays,* such as bean bag passing, stoop and stretch.
5. *Stunts and self-testing activities,* such as crab walk, rabbit hop.

II. ELEMENTARY GRADES (4–6)

1. *Athletic games of low organization,* such as captain ball, circle soccer.
2. *Rhythmical activities and social games,* such as Virginia Reel and Broom Dance.
3. *Hunting games,* such as pom-pom-pullaway, prisoner's base.
4. *Individual athletic events* (self-testing), such as base-running, broad jump.

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[12] LaPorte, William Ralph, *The Physical Education Curriculum,* pages 26–30. Los Angeles: The University of Southern California Press, 1937.

5. *Mimetics and free exercises,* such as sports imitations and sports fundamentals.
6. *Relays,* such as shuttle, skin the snake, stride-ball.
7. *Tumbling,* such as headstand, cartwheel.

III. JUNIOR HIGH SCHOOL (7–9)

A. *Core Program*

1. Elementary Basketball (boys)
2. Nine Court Basketball (girls)
3. Gymnastic Drills, Marching, Elementary Apparatus
4. Elementary Rhythms
5. Elementary Softball
6. Elementary Soccer or Speedball
7. Elementary Swimming and Diving
8. Elementary Touch Football (boys)
9. Elementary Track and Field (boys)
10. Elementary Tumbling and Pyramids
11. Elementary Volleyball

B. *Elective Program*

1. Badminton
2. Boxing (boys)
3. Bowling
4. Golf
5. Handball
6. Hiking and Camping
7. Horseshoes
8. Paddle Tennis
9. Riding
10. Skating
11. Skiing
12. Snowshoeing
13. Social Games and Dancing
14. Tennis
15. Wrestling (boys)
16. Restricted, Corrective Activities

IV. SENIOR HIGH SCHOOL (10–12)

A. *Core Program*

1. Advanced Basketball
2. Gymnastic Drills, Marching, Advanced Apparatus
3. Field Hockey (girls)
4. Advanced Rhythms
5. Advanced Soccer or Speedball
6. Advanced Softball
7. Advanced Swimming, Diving and Life-saving

B. *Elective Program*

1. Archery
2. Badminton
3. Boating
4. Bowling
5. Boxing (boys)
6. Camping
7. Fencing
8. Golf
9. Fly-casting

A. *Core Program*

8. Advanced Touch Football (boys)
9. Advanced Track and Field (boys)
10. Advanced Tumbling and Pyramids
11. Advanced Volleyball

B. *Elective Program*

10. Handball
11. Hard Baseball (boys)
12. Hiking
13. Horseshoes
14. Riding
15. Skating
16. Skiing
17. Snowshoeing
18. Social Dancing
19. Social Games
20. Squash
21. Table Tennis
22. Tennis
23. Water Polo (boys)
24. Wrestling (boys)
25. Restricted, Corrective Activities

The recommended time allotments presented by the committee for each type of activity have been omitted.

As modifications are made in activities and as new activities are invented, such lists of activities will change. For example, the committee at the present time doubtlessly would add Six-Man Football either as a substitute for Touch Football under the "core" program or as an elective.

Changed conditions and circumstances mean changed programs. During World War II when the sole emphasis of the physical training programs was on physical fitness for armed service, the *categories* of activities were: swimming, physical conditioning activities, athletics, combative and self-defense activities, and posture training. The *program content* included such activities as the following: practice and drills in swimming, floating, abandon-ship, rescue, and life saving; lifting and carrying heavy objects; relays; tumbling and stunts; practice and drills in climbing, falling, dodging, pivoting, and crawling; marching; all possible athletic sports appropriate to conditions at hand; special activities for indi-

vidual weaknesses; "grass drills"; group games; posture exercises; relaxation techniques; and physical conditioning exercises.

In program-building and other professional duties the teacher should remain alert to significant changes in conditions, facts and circumstances. The desire to appear to be consistent prevents some persons from keeping abreast of the times. One's beliefs, feelings and actions are part of given conditions, facts and circumstances. If significant revisions occur in this matrix only the fundamental life values escape change.

QUESTIONS

1. Would you include all activities listed under the core program in a course of study for a given school system, for example the one in your home town?
2. Would you prefer to place some of the elective activities under the core program? If so, which ones?

We shall turn in the next chapter to a discussion of some of the forces which tend to make programs of physical education different in various schools and communities throughout the country.

SAMPLE TEST ITEMS

True-False

1. There is no need for the appointment of a course of study committee if there are no persons in the schools who thoroughly understand physical education.
2. The teacher of physical education can count on the principal's recognizing the need for a revised course of study, if one is needed.
3. The trend is toward liberalizing the content of a course of study in physical education.
4. It is not necessary to revise the course of study more frequently than every five years, on the average.
5. Too frequently the course of study is merely an adult-conceived program of activities designed for living in the present adult's world as he knows it.

6. Our idea of "the good life" today is identical with that of a generation ago.

7. A teacher of physical education is less expert in that position if he has to spend some of his time in "integration."

8. New conditions in this country suggest the need for a re-interpretation of the major objectives of physical education.

9. It is unanimously agreed among the experts that health is an objective of physical education.

10. A course of study should be so organized and presented that it recognizes the soundest principles of the psychology of learning.

11. One serious difficulty confronting the program-builder is that there are no criteria to guide him in the process.

12. LaPorte's core program of physical education is suitable to the schools of every American community.

13. A course of study in physical education should provide for some activities that stimulate courage and seem adventuresome to the pupil.

14. A course of study in physical education should emphasize a balance of the capacities of the pupil rather than narrow specialization in one type of capacity.

15. A sound philosophy of physical education must underlie the building of a course of study in physical education.

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8.

Community-School Relationships Affect the Program

"Programs are constructed for communities as well as for individuals."

WE TEACH the child or youth by means of selected activities. The community and the school influence both the learner and the type of available learning experiences.

Teaching takes place in some definite place—not necessarily the typical community and school described in some textbook or in some college course. Like the persons in them, communities and schools have individual differences.

THE COMMUNITY IS A FORCE

Host and guest. The community is the host and the teacher is the guest. The host sets the pattern for speech, manner, and conduct. The guest conforms. This metaphor, like many, is not accurate. Most communities expect the teacher to be *somewhat* superior, advanced and above them. This situation presents difficulties for the teacher. If he wears the purple robe of superiority he becomes a highbrow. The host-guest relationship also presents difficulties because the guest must teach the host's offspring—and because of all that this may imply. Not all communities are hospitable, understanding hosts. Not all teachers are appreciative, cordial guests. Some communities for example are overly aware of their roles

as employer. Some teachers seem to be overly unaware of their status as a public servant.

Community attitudes. Knowledge is not power. Emotionalized attitudes are the power behind human action. Most members of a community are neither critical nor analytical of their attitudes. "That's just the way I feel. That's the way I am." Most persons seem to assume that their own attitudes are a part of them in the same way that their noses and ears are. Even if they realize that attitudes are acquired and spring from imitating others, from experience, teachings, or tradition, they are not concerned. "Am I not entitled to any old attitudes I want to have?" In contrast, the wide-awake teacher is concerned. He knows that determined action may burst forth from one, strong, community attitude, and he knows that the action often is unreasonable and destructive.

The entire profession may condemn the inclusion of some very desirable physical education activity for a given age-group but, if the community strongly desires any activity, it had better be given, at least for a while. All professional experts may agree that a given activity should be included in a program, but, if the community objects, it had better be omitted, at least at first. Patience, tact, and community education often accomplish more, faster, than going too fast and too far even under the wings of a strong administrator. Administrators and teachers come and go; the community remains.

Physical features. Topography, climate, natural resources, and the location of a community with reference to travel may influence program content. It can be seen readily that a standard program for a state or for the nation, if inflexible, is impractical. There are counties and cities where physical features differ enough to demand differences in programs for given age-groups in the various schools.

The teacher can do nothing about climate, or about natural

resources and their taxable values. He can do little, at first, about changing the topography of a school site. On the other hand, some teachers use some of the physical features to the advantage of the program. Wooded sections, lakes, ocean, hills, and streams may enrich a program. Some teachers use climate and weather to advantage. How long will it be before wind, rain, snow, and sleet cease to form a reason for having the program run for cover?

One of the disadvantages of some textbooks and some college lectures is that prospective teachers begin planning in terms of a program which only by sheer chance will be suited to the communities in which they will teach. The doors of their minds and the windows of their imaginations must not be closed. The challenge to every prospective teacher is not only to *adjust* programs to the local community and school so that real service is rendered, but also to become prepared to build *better* programs and devise *better* activities than now exist. The findings of World War II relative to the physical fitness of men in the prime of their lives show that there is a very real need for improvement in *some* phases of physical education!

Types of community. Although it is a fruitless task to try to "type" persons or communities, the latter may be classified roughly as rural, industrial, business, and residential. Cities may embrace all four types of communities within their geographical limits. *As a rule,* the interests and views related to physical education held by persons within one type of community are more alike than are the interests and views of persons from unlike types of these four community types. Some directors of physical education in cities boast of an inflexible *standardized* program for all children or youths of a given grade or class—regardless. Is this a reason for pride?

The reader is not to conclude that there is a type of program suitable for schools in any one type of community.

Nor should he conclude that because he developed a very successful program for a rural community it will be successful in an industrial town. The point being made is that the teacher should *study the community* before he decides on the content of the program.

Nationalities. No successful teacher neglects to find out any possible deeply-rooted folkways related to physical education among the members of a nationality group within a community. The program should be adjusted accordingly. Some parents may be used as temporary, volunteer instructors of an old-country activity or two with open praise by the teacher of the worthiness of such activities. These procedures not only aid in Americanizing the foreign-born but help prevent, or seal, the break that often comes between foreign-born parents and their children.

The beginning teacher must recognize that to ignore the interests of a nationality group is to run the chance of inviting trouble. The teacher should keep an open mind in regard to program content for a school until all pertinent local facts are known.

Community recreation. Too frequently the recreation program of a community, including the programs of the "Y's," "Scouts," and other similar agencies, is not given enough consideration in school physical education programs. These non-school programs serve as the strongest insurance that many of the physical education learnings will carry over to out-of-school hours. Something is amiss when the activities of a physical education program are not carried over into the every-day lives of boys and girls. The recreation program up to the present time is more closely geared to the community's interests than is the physical education program. There should be close cooperation between the public's and agencies' recreation programs and the schools' and colleges' physical education programs.

Community personalities. It does not take long for the

new teacher to hear of a personality or two in the community who takes an *excessive* interest in school programs. Such a person also may be characterized by the lack of hesitancy with which he expresses his views. It is the better part of wisdom to avoid conflict with a community personality of this type. The administrator or an experienced successful teacher can help in advising a new teacher as to dealings with one of these persons. One community personality may do more damage to a program in a few weeks than can be recovered from in years.

Other integral forces. Religious groups, political groups, and vested interests are examples of other integral forces that combine to make the community a force that influences program content. It is no wonder that any school program is a compromise program. In one community, a religious group was powerful enough to eliminate physical education in spite of a state law requiring physical education. Because of the place of politics in American life (not necessarily political parties), a group with the local balance of power may force its will on the school program. The astute new teacher finds out the extent to which these forces exist.

Media for community forces. The foregoing are illustrations of community forces exerted through other means than politics. Often they influence the giving or withholding of needed funds. Organizations and agencies, back-fence conversation, children, parents, the press and radio, public meetings, and the ballot are some of the media through which these forces wield their influence. The discerning teacher sees these forces not only as possibilities for use in opposition to his program but as avenues of operation to educate the community toward favorable support of his program.

The community isolates the teachers. In spite of the number and power of these sociological forces we have been discussing, the teacher should not feel helpless. These forces do not always operate in opposition to the program. In fact,

many communities do not feel strongly about physical education. The persons in these communities are neither black nor white but neutral-gray when it comes to physical education. Other communities place confidence in their schools—within reasonable limits. Teachers and programs consequently are spared destructive, retarding, or debilitating community attacks. In addition, many an administrator serves as a bulwark or ambassador between the teacher and the community.

It is true that the community isolates the school and the teacher. The community prefers to isolate the school physically from undesirable and hazardous parts of the community —from traffic arteries, industrial and business areas, and the like. The community isolates the school also through its desire that the school avoid carrying out the full meaning of the old saying, "Education is life." The community does not want its children to be taught, for example, the extent to which ideals and desirable personal qualities are *not* practiced in everyday life by many adults. The school protects the child from some of life.

Furthermore, the community isolates the school through the cultural gap which is usually demanded between it and the school. Parents want their offspring to lead better lives, learn better and more appreciations, learn more and worthier skills, gain more and better knowledges than were possible to the parents. Some communities purposely demand a school plant that surpasses all but the best homes in quality of architecture, materials, and equipment.

The school isolates the teacher in most communities through community attitudes toward and views about teachers. "Teaching is a profession of teachers—not of men and women." The teacher, that dispenser of ideals and "handler" of children, is not permitted in many communities to live a normal adult life. This teacher-isolation tends to drive too many teachers to find their social associates almost exclusively in the teaching group. Normal social intercourse

with community members is limited and artificial to such teachers.

Later in this chapter some suggestions are made relative to preventing some of this community-imposed isolation.

QUESTIONS

Can you give one actual example of each of the foregoing ways which show that the community is a force influencing the program, the school, or the teacher? Is this force more often destructive or constructive as far as the *welfare of the community* is concerned?

THE SCHOOL IS A FORCE

The school is a social unit and is as such both a *part of* and *apart from* the community.

The school operating as an active part of the community is too obvious for further comment, although the reader might wish to consider the many ways in which this relationship occurs. The school, by its internal structure, purposes, and nature also functions independently of the community.

Internal structure. Two rather distinct age-groups are typical of the school—the students and the faculty. The maturity, experience, responsibilities, outlook, and training of these two groups sets a structural pattern that cannot be avoided. In spite of efforts of some schools to make education a cooperative enterprise, the school unit is dominated by its administrators and faculty. With but few exceptions, the community recognizes these facts. It desires and even demands that the school establish this form of control. Classes, time-schedules, and school regulations are a part of the internal structure.

Internal functioning. This structure indicates the nature of the functioning of the school as an independent social unit. One function of the school is to consider the interests and nature of the learner and adapt the learning processes accordingly. This viewpoint cannot be the sole consideration;

otherwise learning would be retarded and serious shortages in learnings would result. The school must also consider the needs that arise from the experiences of the race. These two considerations do not always bring agreement. As guide and leader of the school-learnings of the child and youth, the school performs in any community a distinct and separate function (although as we have seen, the community *may* exert its force upon this function). Teaching, with its explaining, describing, organizing, motivating, coaxing, disciplining, demonstrating, and all the other processes including school administration and supervision, help to make the school an independent, semi-isolated unit.

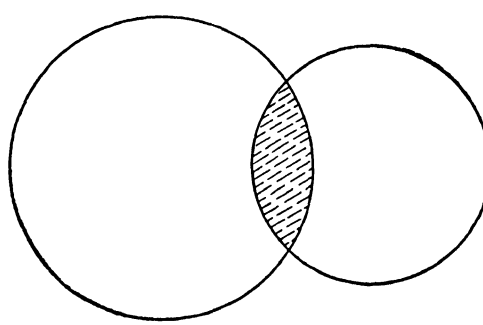


FIGURE 4. THE SCHOOL AND COMMUNITY AS DEPENDENT AND INDEPENDENT SOCIAL UNITS

Binder and leveler. The school through its activities tends to bind students together and to "level" them. Among common expressions heard among students are, "our teacher," "our grade," "our team," and "our school." Students, regardless of social, religious, economic, national, or political backgrounds at home, work together and play together. The "we" feeling, developed particularly through extracurricular activities, is characteristic of school life. As an instrument of democracy the school not only teaches, it *practices* many forms of democracy.

The administrator. One of the most important and misunderstood forces in the school is the principal or superintendent. Emphasis again is made in this book-in-hand on the desirability of giving full cooperation to one's administrator. The inexperienced and unsuccessful teacher should not resent suggestions or decisions of the administrator regarding the elimination or addition of certain activities in the physical education program.

The administrator is the head of the school. He is the one person charged with the responsibility of administrating the school. His judgment is usually final. If his judgment is poor in terms of the welfare of the community and its children, the Board of Education will act. If the Board does not act, the ballot and community processes operate. It is difficult to imagine an administrator intentionally working contrary to the best interests of the community and the pupils. Not all teachers agree with the decisions of the administrator as to ways of working for these best interests. For that matter, not all the teachers in the same department agree on such matters! Teachers are almost notorious for taking a *different* viewpoint on program content; and even when there is agreement, there may be good reasons for revising a proposed program.

The state, county, and local governments exert some control over policies and regulations and make these policies known to the administrator. He knows the pulse and "temperature" of the community. He knows of community personalities, discussed earlier in this chapter. The administrator is aware of the other possible community forces which may affect program-content. He knows the budget, must work within it, and expects others to do likewise. It is he who feels the cross-currents of conflicting pressure groups—forces often unknown to the teacher.

For such reasons, the administrator must sometimes decide against including an activity or a type of activity in a program

of physical education. He is not always free to give reasons for his decision, any more than a circumspect teacher can on all occasions give to pupils reasons for his decisions.

An occasional administrator may be prejudiced personally against an activity or all of physical education. If this is actually the case, the task of the teacher is clear. He is confronted with a challenging job of *selling!* [1]

The foregoing discussion indicates the desirability of the teacher being prepared to present *all* reasons for the program which he proposes. Once the administrator makes a decision, he—like the referee—may change it reluctantly if at all.

Need of perspective. One further word regarding the administrator and a proposed physical education program. Teachers of physical education are well known for their enthusiasm over their profession and their programs. This indeed is admirable. If, however, it leads to an oversized view of physical education in an undersized educational frame, the profession and the program become the objects of ridicule. It is not difficult to stand too close to one tree in the forest. Some enthusiasts are so carried away in their claims for physical education that the claims stretch out beyond the supporting facts. This situation does not serve to inspire confidence in the teacher.

In considering himself a part of "the school as a force influencing program-building," the teacher might well take a look at teachers of other fields who cannot see beyond the narrow limits of their respective areas. If the teacher can see the other fellow's viewpoint and will say so, he is thought of as a reasonable person. Understanding a colleague's viewpoint does not mean having to give up sound points being made in a discussion. Usually, the weighing of facts on both sides means coming closer to winning if the facts bear out one's viewpoint. We humans are more inclined to go along

[1] See Chapter 6.

with the person who is broad-minded enough to see the value of our suggestions, even if he has other proposals somewhat different than ours. As stated above, the administrator may make a decision on program-content which is contrary to the convictions of the teacher. The teacher should accept the decision gracefully and in good humor, analyze all the pertinent data, and perhaps begin preparing for the task of educating the administrator!

Limitations of professional education.[2] Some of the difficulties of the young teacher in program-building stem from the fact that as a student majoring in physical education he failed to apply himself fully; or he failed to be circumspect in his choices and plans.

For example, some prospective teachers want to *over*-specialize. Even a person with great potentialities needs breadth of education or he is likely to see great importance in anthill minutiae. Too frequently early specialization at the undergraduate level results in the teacher who lacks perspective, whose view is myopic. Occasionally one finds professional persons who encourage early specialization. However, the high peaks without the broad base lack balance and stability. No practice can be of long standing which ignores the development of the teacher as a *human being* who helps to guide and to lead other human beings. No matter what one's intentions may be they do not vault past one's understandings and appreciations. More and more all professions are beginning to realize the value of a broad type of training even as a preparation for specialization.

Some prospective and some experienced teachers of physical education feel that their professional preparation has other limitations. For example, one hears many complaints of

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[2] Fredericks, John Wynn, *Gaps, Overlappings, and Other Weaknesses in Undergraduate Professional Training in Physical Education as Experienced in Practical Situations.* Unpublished Doctor's Dissertation. The Pennsylvania State College, June, 1940.

unnecessary overlappings and repetitions in professional courses. There are complaints that two or three *closely* related courses are taught one, two, or three terms apart. There are those who feel that at no time is the professional job pulled together into a meaningful whole. Some teachers complain that the various practical tasks to be performed on the job either are not covered or are scattered piecemeal throughout the undergraduate years. There are some who think that the fifth year of professional preparation now being required in some institutions is merely a multiplication of these limitations. Among the many who go on for graduate work there are those who sense an attempt "to make whipped cream out of skimmed milk."

It may be that there is some basis for these reactions. If there is, appropriate changes will be made—perhaps by the very ones who now complain. On the other hand, the prospective teacher might well check with himself to see if some of these complaints do not arise from lack of application, lack of study, lack of imagination and initiative.

There are no magician-professors who can bring forth rabbit-solutions from their black hats of experience and training. No one can learn for another. What is needed today, more than anything else is the intending teacher who, *on his own initiative*, fills the gaps which he feels his professional preparation may have. As a rule, the students who complain most loudly as undergraduates are the ones who as young teachers want to use their alma maters as a crutch. They are hesitant about learning to walk professionally on their own two feet.

It is urged that intending teachers richly supplement their formal courses by placing themselves in situations where they must make decisions, carry responsibility, be ingenious and imaginative, be self-reliant and adjustable, practice leadership and cooperation, and experiment with and develop their personalities. Any major professor can suggest activi-

ties and projects through which such qualities *can* be developed. But, all too frequently, the prospective teacher begins thinking about these vital matters in the last semester of the senior year. These tools of success are too intricate for one to become adept in their use overnight. Practice in their use should begin in the freshman year or, better yet, in high school. Self-analysis and improvement is discussed at greater length in Chapter 22.

The school as a force needs strong teachers. Here is the statement of one of the country's outstanding administrators: "The physical education program is my most useful tool in running the entire school, *if* it is conducted by a competent teacher. If physical education is handled by an incompetent teacher it then becomes not only the most useless but most troublesome instrument in the whole school."

Avoiding isolation. We have seen that some communities in some respects want to isolate the school. The point also has been made that the community may isolate the teacher. The too-narrow specialization mentioned above may produce weakness in community relationships for the physical education teacher. Some teachers, however, are taken into the community group wholeheartedly. Why are some teachers taken in as one of the community? How do they avoid or overcome isolation? A larger proportion of physical education teachers seem to avoid or to overcome community isolation than do any other group of teachers. This is particularly true of coaches of athletic teams. Why is this true? One reason is that physical educators tend to be more extroverted than other teachers. Even young physical education teachers do not seem to be so much on the defensive and therefore are not mistaken by the community as being distant and aloof. Physical educators have an interest and ability in a rather large variety of activities, many of which the average citizen enjoys. Teachers of physical education learn to be participators—not watchers—in their undergraduate preparation. (Is this squeezed out too much in graduate work?) They

can talk intelligently to the parent, salesman, or banker about sports—an American pastime. The extrovert, social nature of the training of teachers of physical education seems to make them less reserved, more social, more exuberant, and more inclined toward interest in the other fellow. No extreme dignity and aloofness makes them unapproachable.

Some teachers of physical education hold evening classes for townspeople. In these classes, they see that everybody has a good time on the gymnasium floor and "in talking it over" afterward in the locker-room. The goodnatured "joshing" that characterizes so many games and sports can be taken by the physical educator, and he has learned how to "josh" in a palatable manner.

It is told that the elder Dean William Russell, Teachers College, Columbia University, once said, "I don't know whether folks with personality go into physical education or whether participating in physical education develops personality, but I have observed that the two so often go together." The very nature of one's job as a teacher of physical education, the fact that one soon learns that approachability "wins friends and influences people" in physical education, the fact that one does not lose the play *attitude*, and, the *leveling* effect of sports, all tend to help the teacher of physical education avoid or overcome community-isolation. Whether or not the previous sentence applies in each individual case is a question for the individual to answer.

The school forces community changes. Just as the community as a force results in compromise programs in the school, so the school as a force changes the community. Education in and of a community occurs in three general ways. *First,* the school effects deferred changes in a community through educating future citizens. *Second,* some changes in the home and in parents' attitudes are effected through the child. *Third,* effective adult education speeds up changes in the community.

On the other hand, communities usually do not change

rapidly in most respects. The community-drag on education is not all disadvantageous. It serves as a safety-brake, preventing a zigzag joy-ride from one fleeting fad to another. This resistive texture of the community limits progress in some cases but it also prevents following some of education's will-o'wisps.

The new teacher will find that to change community attitudes and cherished beliefs is a far longer process than changing its knowledges and skills. The let-them-experience method of changing attitudes usually is more successful than the discussion method. As a rule, a banned activity may be accepted finally if it is introduced piecemeal, in modified form and under a different name.

In conclusion, the teacher sees that program-building is influenced by forces in the community, in the school, and by the interplay of these two forces. These three factors vary from community to community and from school to school. There can be no ideal program that is suitable or sensible for all situations.

ASSIGNMENT

It is suggested that the class be divided into two groups for the purpose of debating the following proposition: RESOLVED that the community is a stronger force in influencing the content of the physical education program than is the school.

SAMPLE TEST ITEMS

True-False

1. Physical education activities may be a part of both teaching and techniques of teaching.
2. One set program for a city may inadequately fit all sections of the city.
3. Regardless of the social patterns of a community, a teacher should adhere strictly to those in which he was trained.
4. Most members of a community acknowledge that they know very little about how education should be conducted.
5. A program of physical education that is successful in one com-

munity is certain to be successful in other communities of the same size and location.

6. The influence of the community upon physical education is limited to those opinions which it expresses through the press and the members of the board of education.

7. It is an undeniable fact that any wealthy community provides adequately for the education of the children of that community.

8. In communities consisting largely of foreign-born adults, the teacher of physical education should strongly insist that only American physical education activities be offered in the schools.

9. The average citizen is aware that his interests are the results of his education.

10. Community attitudes toward physical education are more powerful factors than is their knowledge of physical education.

11. The only way communities change their attitudes is through slow experience.

12. The modern program of physical education is right and scientifically justifiable and therefore should be immediately introduced into every community.

13. If the program of physical activity offered at the local "Y" is entirely formal, the teacher of physical education in the schools should offer this same type of program.

14. Some communities prefer to dismiss a teacher of physical education rather than change beliefs and attitudes toward certain physical education activities.

15. A few school administrators are prejudiced against physical education.

16. If a school administrator rejects the program of physical education recommended by the teacher, it is an indication that he is either prejudiced against physical education or dislikes the teacher.

17. Most of the verbal criticisms of a community against teachers are borne most heavily by the superintendent.

18. It is impossible to build a physical education program that will be acceptable without considering the pressure groups existent in every community.

19. The changes made in a program of physical education because of pressure groups always detract from the value of the program.

20. The community through its pressure groups changes the schools more than the schools change the community.

21. Teachers should keep the issues involved in their program out of local politics.

22. The conduct and content of the physical education program must be absolutely independent of influences of any person in the community.

23. Since physical education is the most important "subject" in the curriculum, the school administrator always should make decisions favoring the expansion and development of physical education.

24. It is better for a teacher to avoid clashes with pupils than to win an argument temporarily or show authority successfully.

25. The ideas of a community regarding physical education are usually "behind the times."

26. The educational drag of a community is valueless.

27. The school always leads the community in educational and sociological understandings.

28. It is usually more difficult to teach an adult new skills than to teach him new attitudes.

29. The physical educator should avoid the mistake of discussing a pupil's vocational aspirations if they are outside the field of physical education.

30. The teacher should avoid appraising the desirability of various vocations unless he has informed himself regarding them.

31. Pupil followership should be recognized in physical education quite as much as pupil leadership.

32. Any capable professor should be able to tell a student exactly how to solve the problems he will meet once he begins to teach.

33. Most of the major problems of physical education are fundamentally in the hands of the school administrator.

34. The school as a social organism is somewhat isolated from the community.

35. Physical education can be richly integrated with all other school "subjects."

36. The way to stimulate pupils to regard physical education as a part of their lives is to emphasize it as a type of experience apart from other school experiences.

37. Parents invariably agree with their offspring regarding the latter's needs and interests in physical education.

38. Physical education can be used to develop school morale.

39. The school organization greatly facilitates democratic relationships.

40. The political setup within the school helps isolate it from the community.

41. The community opposes the isolation of the school.

42. Parents expect the school to prepare their offspring for a better life than the parents themselves have experienced.

43. Teachers of physical education should continue to act like teachers, in out-of-school hours.

44. Teachers have contributed to the isolation imposed upon them by communities.

45. Every aspect of isolation between school and community should be eliminated.

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9.

The Teacher as Selector of Activities

"Hammering too hard on one side warps even the silver and gold of human material."

THE OLD saying, "The King can do no wrong," does not apply any more to the teacher than Lowell's statement, "Truth forever on the scaffold, wrong forever on the throne." Another axiom, "To err is human," more closely fits the case. The teacher tries to avoid errors in judgment in program-building because such mistakes may be harmful to many children. The teacher also attempts to circumvent judgment errors in guiding pupils as they cooperate in the selection of activities.

At times it is difficult for the teacher to recall that he takes *himself* to the task of building the program. What the teacher thinks, feels, and does largely determine the activities selected unless the committees assisting him in program-building overrule his judgment. What are some of the factors that may contribute to making or permitting the teacher to make errors in judgment? Being aware of these possible sources of error should enable the teacher to guard against them.

Traits of heredity. Although the determined individual may accomplish "wonders" in overcoming his biological heritage, it does set limitations and serve as a basis for tendencies. If a person has given little thought to possible sources of errors in his judgment, there is little to be gained if he

blames his "heredity" for his poor judgment! Such conditions as the teacher's health, certain types of physical defects, vitality, certain types of emotional stability, and intelligence may be partially related to biological inheritance. These qualities do not *directly* modify the teacher's part in building a program so much as they may by *indirect* influence.

The teacher in excellent health and with great vitality may *inadvertently* select a program of activities that assumes the possession of these qualities to a similar degree, by the pupils who participate in the program. The teacher who has an inherited defect might inadvertently build a program that too obviously recognizes those pupils with physical defects. Such examples illustrate the need for recognizing heredity as a possible source of error in judgment, as a program is being constructed.

Experience. Teachers rely to a considerable degree upon their experience as one basis of program-building. This use of experience is justifiable if it is the kind of experience that has *educated* the teacher. Past experience is helpful if present conditions and circumstances also are fully considered, with an eye to the future. But if a teacher's experience is based solely upon his subjective judgments and his incidental observations, his experience is a curious mixture of truth and fancy. The plea here, then, is not for the abandonment of personal experience, but for extreme care in its use. It should be looked upon as only one preliminary source of ideas and not the final yardstick.[1]

In any case, tested experience is a much more reliable guide than untested experience. It is regrettable that some experienced teachers resort to untested experience as the sole justification for program-building. If this were in fact the only guide or the best guide in the construction of a program, we would still be teaching such activities as weight-lifting or the

[1] Barr, A. S., Burton, W. H., and Brueckner, L. J., *Supervision*, pages 868, 869. New York: D. Appleton-Century Company, 1938.

exercises of Delsarte. The point is re-emphasized that changed times and changed conditions mean changed programs. It is believed that the adults of tomorrow will find themselves in a world that differs from the world of today.

A different kind of experience that applies to both the mature and the novice teacher relates to life-experiences, apart from teaching. These, like other experiences, form many of the bases or sources of attitudes. Lack of a desire to understand and to be sympathetic, indifference, refusal to consider all possible factors basic to a decision, a desire for personal renown instead of consideration for the welfare of others are a few examples of attitudes that teachers may have acquired from life-experiences.

One "shock" experience, or an accumulation of experiences over a period of years, is often forceful enough to influence the teacher's selection of activities unless they are recognized and discounted. Teacher *A* tells of a serious injury incurred as a high school pupil while attempting to perform on parallel bars against his wishes. Later on when he became a teacher, he refused to include this type of activity in his physical education program at any grade level, regardless of other factors. He was asked in January to resign from his first position because he refused to cooperate with the administrator who advised and finally demanded that some apparatus work be offered. Teacher *B* relates that, beginning with junior high school and continuing through college, the physical education program to which he was exposed was the "here is the ball" type. These years of observing and experiencing an irresponsible program prejudiced him against the *game* type of program. He admits that during his first three years as a teacher, his programs of physical education were restricted to formal activities only. When we take the trouble to examine some of our experiences in the school, home, and street, we can better understand some of our attitudes and thus take

the first step in guarding against errors in judgment arising from them.

The teacher's cultural background, his former associations, his precollege education, his educations gleaned from the playgrounds, movies, alleys, market place, and church, all combine to help make him what he is. The prospective teacher does not automatically drop the influence of these kaleidoscopic experiences when he begins his undergraduate professional preparation. Four or five years of teacher education under the most favorable conditions result in effecting only some changes in attitudes. When the student becomes a teacher, the basis for his choices of activities often antedates the years in college. Unfortunate experiences of these previous years imperceptibly and negatively influence his judgment as a teacher, if he fails to recognize "experiences" as a possible source of poor judgment.

Professional education. Nevertheless, the beginning teacher is influenced in his program construction to a greater or less degree by his professional preparation. If he has attended a given institution, he may select a program of physical education that includes posture exercises, marching, calisthenics, and heavy apparatus because of the program and recommendations of the major professors in that institution. If he has attended another institution, the program he selects as a teacher is apt to consist of games and sports. If he has attended a third institution, his school program may be "heavy" with rhythmical pageants and recreational activities. The point is that the type of program with which a teacher is indoctrinated as a student-in-training may overbalance other factors. Sometimes the novice teacher's program is not a fair interpretation of his professional education. Not infrequently the novice forgets the *modifying* and *limiting* remarks that accompanied a professor's proposed programs of physical education. On the other hand, it may be possible that a few

students-in-training are indoctrinated beyond reason. Occasionally they are not warned that programs of physical education must be constructed with many factors in mind; at least, some young teachers forget that they were so warned.

The beginning teacher carefully evaluates his professional education as a vital influence in determining the program he constructs, and guards against using it indiscriminately. The chief responsibility of the young teacher is to interpret his professional education properly in terms of the pupils, school, and the community in which he is teaching. There should be no feeling of disloyalty if he adopts a type of program for a given situation that was not followed at his alma mater or recommended by his professors.

The beginning teacher has his own career to make. For this reason, there is a decided trend in teacher education to emphasize self-reliance, ingenuity, and initiative on the part of students-in-training.

Attitudes.[2] In addition to attitudes that arise from "shock" experience or the accumulation of many experiences, a myriad of other attitudes arise from such sources as (1) the teacher's education, (2) his imitation of others, (3) suggestions arising from such a medium as moving pictures, and (4) from individual applications of and personal differentiations of the general, nonspecific attitudes of approach and avoidance. We are just beginning to recognize fully the major role that attitudes play in pupils' behavior and conduct and the absolute necessity therefore of helping them attain desirable attitudes. In most instances, the first step is for the teacher to ferret out and analyze his own attitudes. After isolating and identifying them, he may wish to modify them if he desires to decrease or eliminate prejudices, intolerances, and biases.

The teacher's attitudes toward teaching as a profession,

[2] Prescott, D. A., *Emotion and the Educative Process*, pages 80–84. Washington, D. C.: American Council on Education, 1938.

children, the community, his own responsibilities and duties, and the purposes of education and physical education affect the kind of program he constructs. There was a time when pauperized, unplanned programs of physical education were in existence because teachers lacked proper training. But today there is no reason for such an excuse. Inappropriate programs exist today partially because those who construct and conduct them lack the kind of attitudes that drive one to be satisfied with only the best, that demand one to consider such qualifiers as *this* community, *this* school, *this* class, and *this* pupil.

What are the requisite attitudes of the teacher as a program-builder? Their number and variety are legion. Here are a few examples: a desire to know, appreciate, and understand the needs, potentialities, interests, peculiarities, and abilities of each pupil; a desire to serve the community by providing the best possible program for its children; unselfishness, sympathy, tolerance, and patience toward the pupils; alertness and progressiveness in following trends in physical education; a desire to adapt one's ideas and plans to those of the administration; and enthusiasm, courage, and firmness in working for the best interests of the child.

Too often a list of attitudes such as this is read without interpreting them in terms of action. Some teachers who lack the requisite attitudes reason something like this: "It is all very well for you to talk about being cooperative, enthusiastic, and interested in the pupils' welfare, but you don't know my job. You have no idea what I have to put up with." Then there are a few unanalytical teachers who eagerly admit they have all the requisite attitudes, without bothering to find out if they actually possess these qualities. And, there are a few teachers who regard teaching as a sort of trade. They regard any discussion of the necessity for self-analysis as so much "theory." This general attitude is summed up in this oft-repeated dodge, "I'm just that way," the inference being that

no change is possible, so why find out if there is need for change.

Increasing attention is being given to the actual activities of teachers. The trend today is to find improved tools that measure these activities. The results of such research raise a still further question. Why does the teacher perform the activities he does and in the way he does?

The common answer to this question is that the teacher lacks a proper professional education. This statement is difficult to believe because one of the chief purposes of professional education today is to reform the attitudes of prospective teachers. The knowledges and skills acquired by the teacher-to-be miss their point if he does not form appropriate attitudes. Of course, it is possible for students-in-training to major for four or five years in physical education and still harbor attitudes after graduation that prevent the proper selection of activities. The inexperienced and experienced teachers alike must face this question if they are to work toward improved teaching: "Do I possess the requisite attitudes to take the responsibility of program-building?" This question digs into the problem of curriculum construction still further than a mere consideration of knowledge and skill in program-building. This question calls for some thoroughgoing self-analysis.

There is too much pretentious talk and humbug writing about the dangers of self-analysis. If the teacher refuses to face the facts and try to ferret out mistakes, how is he to improve? Shall he sit calmly by, waiting for the principal or supervisor to point out his mistakes? There is no attempt here to overlook pathological types and degrees of introspection. There is a definite attempt here to emphasize the point that much improvement in teaching is self-improvement, and this is based in part upon self-analysis. Too often a maternalistic attitude is expressed by writers or speakers toward the young teacher's ability to engage in any fruitful self-

analysis. Their idea seems to be that the inexperienced teacher cannot discover a substantial number or the types of his attitudes which serve as obstacles to improvement. It is the experience of the authors that even as early as the first semester of the junior year in college, students-in-training show considerable ability in isolating attitudes that may possibly warp their judgments in program-building. The following list of attitudes of one young woman is a selected response:

1. In preparatory school I never had to participate in any activity that did not interest me. In college the case was different. I am convinced that a program should be based on pupils' interests.
2. I am likely to be partial to certain children, and show it.
3. I very much dislike the modern dance.
4. The ideas of my physical education teacher in preparatory school strongly influence even my present ideas, in spite of what you professors say and even though the books I read disagree with this teacher.
5. I dislike swimming.
6. I am very partial to hockey.
7. I dislike basketball.
8. I am very independent and will strongly object to "playing ball" with the administrator if he makes suggestions about my program.
9. I have racial prejudices. I could not give the same attention to the welfare of the children of parents of certain races as I could to other children.
10. I dislike small towns and the average kind of people that live in them. I'm ashamed to admit it, but I actually look down on them.
11. I wholly disapprove of interscholastic activities.
12. I heartily disapprove of demonstrations, exhibitions, and pageants.
13. I am quite self-confident and usually believe I'm right.
14. I lose interest quickly in things that do not get me expected results.
15. I dislike all formal activities.

Some of these self-recognized attitudes undoubtedly would have emphatically affected this young woman's selection of

activities if she had failed to engage in self-analysis. This student now recognizes these attitudes as possible sources of errors in judgment, and she can begin the process of reforming these attitudes. This self-analysis helped make her see that she *takes herself* to the task and responsibility of program-building.

Philosophy. The sum-total of the teacher's experience, including reactions to environment, professional education, attitudes, and whatever influence his hereditary traits may have upon these factors, all influence his philosophy. It is true that the young teacher may not have developed a seasoned philosophy of physical education; yet he has one, and it profoundly influences him as a program-builder. The teacher's philosophy of physical education determines the degree to which he accepts the responsibility of considering the child's welfare, how carefully he attacks the problem of program-building, how conscientious he is in continually evaluating the program in terms of objectives and stated values, and how carefully he considers all the other forces and influences that are considered in program-building.

Some experienced teachers have never taken the time and trouble to prepare a written statement of their philosophy of physical education. In such cases their respective philosophies usually operate as unrecognized but tremendous influences, and this is undesirable. Unrecognized influences permit the teacher to construct a program based in part at least upon unvalidated assumptions, enabling the teacher to practice that unscientific process of taking-for-granted. The teacher himself is unaware of the origin and basis of the feelings which cause his preferences. Experienced teachers are invariably astounded at the puzzling results when they prepare detailed analyses of their respective philosophies of physical education. Here are a few of the items in an analysis of one experienced teacher:

1. I do not believe in classification of pupils.

2. I believe in taking into account individual differences in pupils.
3. I consider vigorous athletic games much superior to physical education activities.
4. I consider the chief values of physical education to be exercise, strength, speed, endurance, and coordination.
5. The so-called social and character-building values of physical education are overrated. They are best developed at home and out of school.
6. I believe in such disciplinary measures as giving the class calisthenics when they "get smart" in physical education class.
7. I believe in drills on fundamentals as the best way to learn.
8. I do not believe in testing.
9. The success of my program is judged in terms of how well the boys can play the games.
10. There is little you can do to improve a boy who "hasn't got it."
11. My obligations to the community are satisfied when I teach their pupils and turn out good athletic teams.
12. Our present generation is too soft on the boys. I do not believe in making the junior high school boys' program any easier than the senior high school boys' program.
13. Boys do not know what they're interested in; they're not old enough.
14. My grades are based upon the boys' attitudes and how well they can play games.
15. I select a program that I know is good for all the boys in the class.
16. High school athletes should be excused for the semester in which they are participating.
17. I do not believe boys and girls should ever play together in the junior and senior high school.
18. I believe a boy should show considerable improvement in a game before letting him take up another game.
19. The physical education period should be spent in work, not recreation.

This teacher not only found contradictions in his convictions, but by detailed analysis prepared himself to check the justification and soundness of his beliefs. It is not difficult to visualize, in part, the type of program this teacher had been using. A teacher's conception of the kind and degree of results he expects from physical education, and the type and

scope of the values he places upon various areas in physical education, furnish a fairly good index of the type of program he would construct.

SAMPLE TEST ITEMS

True-False

1. A teacher's biological heritage has considerable influence on his selection of activities.
2. Experience automatically renders the teacher capable of wisely selecting activities for a physical education program.
3. Experiences in life automatically render the physical education teacher capable of making satisfactory selections of activities in program-building.
4. Recognition of possible sources of attitudes that may affect judgment is a first step in guarding against such influences.
5. A teacher's professional education may be of such a nature that he selects inappropriate activities for his program.
6. Some prospective teachers ignore the limitations of programs of physical education mentioned in texts and by their professors.
7. The act of selecting activities is governed not by the teacher's knowledge but by his attitudes.
8. The teacher should not engage in self-analysis because it is dangerous.
9. Students-in-training are too immature to recognize personal attitudes that may interfere with the satisfactory construction of a course of study in physical education.
10. Young teachers do not possess a philosophy of physical education.
11. May one's biological heritage influence the type of activities he selects for his pupils?
12. Is experience bound to be a "wise teacher" in guiding one through the process of selecting activities for his physical education program?
13. May your professional education give you biases and prejudices toward certain types of activities?
14. Can one get all the data he needs for building his program by consulting his professors and reading the standard texts in the field?
15. Does one's knowledge govern his selection of activities?
16. Is it a valuable type of training to attempt to recognize the source of one's own attitudes by self-analysis?

17. Is one's philosophy an intellectual matter and not a matter of feeling?

Matching Questions

CONCEPT	NUMBER	APPROXIMATE DESCRIPTION
1. Traits of heredity		Emphasis on special types of programs, limitations of authoritative opinion
2. Experience		Relative stature, relative energy supplies
3. Professional education		Value-concepts in the field
4. Attitudes		Incidental observations, untested experience
5. Philosophy		Need for careful self-analysis of

PART III REVIEW TEST ITEMS

Directions: Presented below are two practical situations. Included in each situation are various factors, stated or implied, which indicate what you are to consider in selecting a program of physical education for that situation.

Problem I [8]

In August you receive an appointment to a position as teacher of physical education and teacher of an academic subject in a junior and senior high school. You neglect to visit the town until the day before school begins. You report at once to the supervising principal, soon find a suitable room, and then return to the high school building for a "survey."

You find that your position is in a combination junior and senior high school of a total enrollment of 800 pupils, 450 boys and 350 girls. Of these numbers, 300 of the boys are in the junior high school; 225 of the girls are in the junior high school.

The population of the town is 4,000. It is located in an average farming section, although near by are a few mines of a low-average soft coal. The topography of the vicinity is reasonably level except on the north, where the mines are located in a few rolling hills. The

[8] Taken from an actual situation.

business houses look "run down," the residences also do not bespeak a high socio-economic level for the community, and the cornerstone in the high school building bears the inscription "1912." As you walk down the halls, you observe that the building is not well maintained and repaired, and the janitor service seems to be poor.

You find the "gym" in the basement. The ceiling is about 15 feet high with heating, water, and sewage pipes running here and there across it. The only natural lighting consists of four 3 feet by 4 feet windows at one end of the gymnasium near the ceiling. The size of this room you estimate by "pacing off." You estimate it to be about and not larger than 35 feet by 45 feet. You notice that the gymnasium is very cool. You also observe that there are no radiators. The only permanent equipment consists of the two goals for basketball and two "chest-weights," but inspection shows that the ropes in these are broken and all the weights gone.

You next find the locker room (the following description fits both the boys' and girls' locker rooms). It is also located in the basement but without any outside light or ventilation. It has no method of artificial heating. The room is very small, about 8 feet by 15 feet, and literally jammed with old, rusty, two-tier, steel lockers. The locks have long since been broken and some of the lockers have no doors whatsoever. In one corner there is one showerhead. To keep the water from splattering too much, a mildewed canvas curtain surrounds the showerhead. In the case of the boys' locker room, you find it is used by the "varsity" teams. The total number of lockers left for physical education classes for boys (during basketball season) is 24. The total number of lockers for the girls is 60. In each locker room is a washbasin with running water. In each case, the toilets are down the hall, about 20 feet away.

The supervising principal has given you a key to a cupboard where he said you would find the playing equipment. You find this to be located in the janitor's room. In it you find one old, badly torn, decaying tennis net, two old basketballs, three worn-out playground baseballs, and a broken bat.

You return to the administrator's office to find him gone home for lunch. His secretary is still there. Of course you hide your disappointment and disillusionment. By tactful questioning you find that you have no office. ("Last year's teacher of 'fizz ed' used [his] [her] homeroom.") You also discover from veiled statements of the secretary that the supervising principal is probably a strict disciplinarian, that your predecessor lost his job because he "let the kids play

games instead of giving them 'gym' work," and because he was "always complaining about the poor facilities for 'fizz ed.' "

You decide to leave for lunch, and, having made no arrangements for meals, you go downtown. You select the cleanest looking of the four eating establishments. As you pay your bill, the proprietor "spots" you as a stranger. He soon discovers that you're the new "fizz ed" teacher, and you discover he is a member of the board of education. You form the tentative opinion from your brief conversation with him that he does not like the way the school is being administered and probably is "against" the supervising principal.

After lunch you find the administrator at school. He is busy but says he can give you ten minutes of his time. During this period you find out that about 30 per cent of the population of adults are Italian immigrants, 30 per cent are third-generation Germans; and the remainder a fifty-fifty mixture of immigrants from other foreign countries and "Americans."

This additional interview enables you to sense that the administrator is the type that wants all the credit for ideas, wants to be thought of as the Big Boss, and has a vicious attitude toward persons who "cross" him.

You return to your lodgings to think over this whole discouraging situation, but in five minutes the landlady knocks on the door. She is bringing in a bouquet of flowers and a vase to "make your room a bit more cheery." You soon discover this is probably just a pretext for her to find out all she can about you. She does find out your religion, your home town, your college, and the fact that this is your first teaching position. In turn, you find out by tactful statements and questions that the community is totally indifferent to physical education, that they disliked your predecessor because (he) (she) thought (he) (she) was "too good for us." "Why! At least once a month (he) (she) pulled out on Friday after school and didn't return until Sunday night *after* church." You also find out that she is a strong supporter of the supervising principal, and that the secretary at the school is the supervising principal's sister-in-law.

The next day (Tuesday) registration begins, and you discover that physical education is scheduled last. Pupils take physical education in their free periods, irrespective of their year in junior or senior high school. Each pupil takes physical education once a week. No costumes are *required* because "some pupils can't afford them and anyway there is only one shower." You thus discover that taking a shower is voluntary on the part of each pupil.

By the end of the first day you find out that no program of intramurals has ever been offered. All teachers are agreed that such a scheme, in their opinions, would "not work anyway because the kids hate 'fizz ed.' "

You observe that most of the pupils are poorly clothed. A few are very well clothed. You learn that a few families "have money" and that these children of the higher socio-economic bracket are in a distinct clique. This has resulted in "bad feeling" within classes, teams, and the school in general.

An older teacher, who is friendly toward you, tells you that the "upper-middle" class of citizens and the "higher" class are "against" the supervising principal. The "lower-middle" and "lower" classes, consisting of 85 per cent of the population, are "for" him. This older, friendly teacher tells you that the only reason (he) (she) has been there so long is that the supervising principal has a policy of *never* giving a recommendation.

In the middle of the afternoon of this first day, the administrator tells you he would like to have you submit a *tentative* program of physical education for the entire year. You try to "sound him out" as to his position on a formal or informal program. He replies: "Oh, that's up to you. I always give my teachers full authority and responsibility in their respective fields." Of course, your alertness and observation contradict this show of liberalness.

What tentative yearly program would you submit to him, considering all factors as given to you above?

Problem II

Directions: Presented below is another practical situation. Included in it are various factors, stated or implied, which indicate what you are to consider in selecting a program of physical education for that situation.

1. *Population served:* 2,000, located in the state of _____.
2. *Type of community:* rural; five school districts.
3. *Topography:* flat, good soil, no streams or lakes.
4. *Personnel of community:* 90 per cent third generation German; 5 per cent Amish; 5 per cent first and second generation Polish and Russian.
5. *Natural resources:* fairly rich farm lands located in a broad valley; hills located 10 miles away on either side.
6. *Type of school:* consolidated; including all twelve grades.
7. *Financial support of school:* above average of schools of same size in the state.

8. *Population of school:* 400; 225 in grades 1 to 6 inclusive; 100 in junior high school, of whom 55 are boys; 75 in senior high school, of whom 40 are boys.

9. *Distribution of school population:* pupils live an average of 6 miles away; none lives closer than two miles; all come to school in school busses.

10. *Background of community and school in physical education:* none whatsoever.

11. *School building:* just built, one large building; gymnasium at one end; size of gym floor, 60 x 90; high ceiling; ample locker room and shower room; plenty of new ½ length steel lockers; plenty of showerheads; cubicle system for girls; locker room includes satisfactory toilet and washing facilities; boys have drying room for athletic equipment; locker room also includes equipment or towel room. The locker room is adjacent to the gymnasium. The gymnasium is adjacent to the library on one end and a classroom at the other end.

12. *Indoor facilities:* the school board has anticipated the introduction of physical education and has spent $6,000 on horses, bucks, mats, stall bars, flying rings, and other equipment for a formal program. Two basketball backstops are also included. The floor of the gymnasium is made of tongue and groove maple strips and properly treated.

13. *Outdoor facilities:* none; although the school owns five acres of level pasture land adjacent to the building.

14. *Size of classes:* all elementary children have physical education classes at the same hour, twice a week. Same for junior high school. Same for senior high school. That is, your job includes teaching boys and girls throughout all grades, and each of the three school levels comes to class at the same hour.

15. *Towels, costumes, etc.:* since no physical education has been taught before, you are to make up your own regulations. No budget allowance for towels or costumes.

16. *Equipment:* no equipment on hand other than that mentioned under number 12. School board allows you $50 for this item.

17. *Interscholastic athletics:* no athletic teams have ever been formed (new consolidated school). No budget. Must raise funds by a plan devised by you. Principal wants girls' and boys' interscholastic athletics.

18. *Intramural athletics:* no program; no budget.

19. *Climate:* similar to your home town.

20. *Length of physical education period:* 45 minutes.

21. *Health instruction:* no provisions. Up to you to "sell" the idea for next year.

22. *Your load:* one free period in day. Must coach all athletic teams (in case of girls: the principal will coach the boys' teams).

23. *Religious beliefs of community:* 50 per cent Catholic; 50 per cent Protestant.

24. *Political affiliations of community:* 99 per cent Republican.

25. *Attitude of school personnel:* skeptical of physical education.

26. *Type of principal:* old-fashioned, nonprogressive; formal rural school teacher; first year as principal; on the defensive when "new ideas" are proposed.

Outline the program you would propose for the first year.

IV.

What Is the Nature of the Pupil?

10.

Similarities in Pupils

"A man's a man for a' that."—BURNS

Human likeness. The provincial American is heard to say, "All Chinese look alike." The same statement may be applied to Indians, Japanese, Frenchmen, and other nationalities with which the speaker is relatively unfamiliar. The mid-westerner may say the same similiarity applies to New York City residents. Probably the average Russian thinks all Americans look much alike. There are some facts which stimulate the above generalization. Groups reared in the same environment take on the same large behavior patterns, whether they be in speech, manners, style of dress, or postural and movement patterns.

Human similarities go deeper than external appearance and overt behavior. They include basic needs and basic drives to action. Kipling says "The Colonel's Lady and Judy O'Grady are sisters under the skin." Such expressions as "the common man," the "ordinary mortal," or "just an average American" are recognitions of similar needs, similar desires, and similar life experiences.

Differences only in degree. Scientific study has indicated that normal human beings all possess the same traits. They merely possess different degrees of the various traits. One individual may seem to possess a higher degree of academic aptness; another may seem to possess greater social intelli-

gence; a third may rate high in mechanical abilities or motor skills; a fourth may be highly sensitive to emotional stimuli and to the esthetic aspects of our culture. Each has some degree of the above aspects of human personality. The *quantitative* differences in the various aspects, when blended into that dynamic whole called personality, result in human individuality. But the separate individuals differ only in degree. They have the same basic drives and the same developmental patterns. All normal persons want food, comfort, security, affection, respect, and opportunity for self-expression.

Specific trait variation often measured. In physical education many measures have been made of specific aspects or traits of individuals. The maximum contractile pull of a muscle or set of muscles has been registered on various types of dynamometers. This aspect, called strength, has been measured for hand grip, back and leg lift, and so forth. Various types of speed have been measured. Speed of perception received emphasis in pilot training during the war. Speed of simple response has been measured many times and compared with speed of response after choosing between stimuli. These latter types of speeds have taken on great significance in safety studies on automobile driving. Accuracy, both in reference to precision of movement and in projection of an object toward a target, is frequently measured. The ability to persist at an activity, called endurance, is frequently measured.

The normal curve, a group picture. When human traits such as those mentioned above are measured for large groups of individuals, the measures show many individuals grouped around the average and a few at both extremes. The common way of depicting such measures is to illustrate the scores in strength, speed, or what not on a horizontal line. The lowest scores are at the left and the highest at the right. The horizontal line is scaled in units to illustrate the varying amounts of the trait. The numbers of individuals that fall at each

particular score on this horizontal line can be represented by units in a vertical direction above that particular score. When the points vertically above the horizontal line, representing numbers of individuals at each score, are connected by a continuous line, the line forms a bell-shaped curve. In almost all human traits, providing a large number of individuals have been measured, this same curve appears (See Figure 5). Because this curve is always found when we

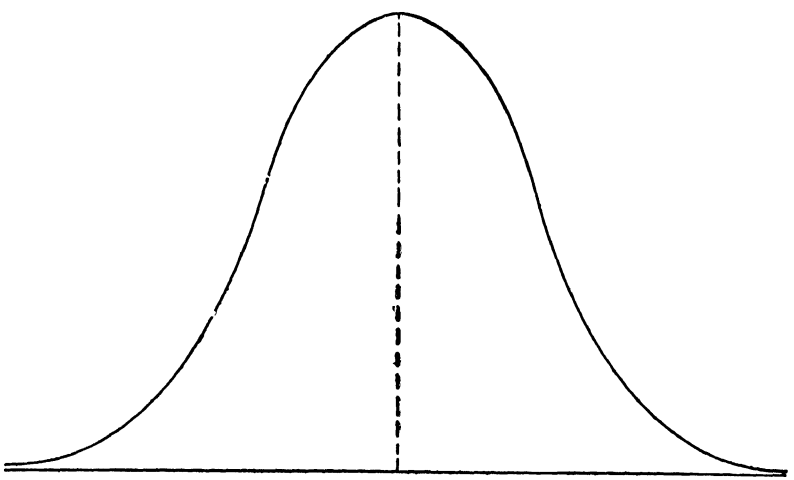


FIGURE 5. NORMAL FREQUENCY CURVE

measure one aspect of many individuals, it is called the normal curve, or the normal frequency curve. Frequency refers to the number of individuals at each score as indicated by the height of the curve above that score on the horizontal line. This curve will occur in measuring human traits whether they be mental, physical, physiological, emotional, or social. One gets the same distribution of individuals, with many grouped around the average and a few at the extremes, whether he measures the length of the large toe, the strength of the legs, the academic intelligence, or the sensitivity to emotional stimuli.

Man tends to be average. Any particular individual may vary markedly from the average in some particular trait. His scores on various other aspects or traits are very likely to be closer to the average, In other words, extreme variation in many aspects of one's personality is very unusual. The specialist tends to be average in all traits of his personality except his specialty. Wide variance in many traits is the exception rather than the rule. This is just another way of reiterating the earlier statement that human beings are much alike.

Education attempts to produce basic similarities. Education attempts to adapt varying human traits to civilized customs and conventions. Health rules and behavior are relatively standardized. A certain approved social and ethical behavior is the educational aim for all normal humans. Each normal individual is expected to take on basic skills and knowledges that are the transferred social inheritance from the past experience and improvement of man. Of course he can not absorb the entire amount of learning from all his predecessors. His individual ability to learn and the time he has available are limiting factors. But as teaching improves, he may be able to adapt more and more of this vicarious experience to his own needs.

Trait emphases obscure human likenesses. Classification of individuals according to variation in exceptional traits has caused us to overlook the great similarity in individuals when all traits are considered. In the field of physical education, clumsiness and awkwardness seem to indicate lack of suitable activity-experience rather than inability to learn. Most motor tests merely measure *acquirement to date.* It seems probable that, with fostering environment, adjusted teaching techniques, strong motivation, and adequate time, most individuals could acquire such basic body-control skills as are essential for ease, grace, and efficiency of movement in the ordinary activities of life.

In the psychological field, various attempts have been made to classify individuals into groups according to a particular variation in some single trait of personality; for example, athletic types, research types, social types, and the like. Studies aimed at type classification are valuable in that they call attention to important aspects of personality. They may be misleading in their inference that humanity is classifiable into types; or in that too great emphasis may be placed upon a certain aspect of personality. Personality is not a summation of traits but a blended whole. Each component part modifies the other parts and is itself modified by its inclusion in the unity of the individual's personality.

These emphases as to aspects of personality stress types of responding, drives to action, and the like. Adler held that the individual was driven by an urge toward a superiority goal as an escape from feelings of inferiority and inadequacy. To test the truth of this theory as it applies personally, one may try out on himself the symptoms of inferiority listed by Bagby. They are:

1. Tendency to run down others.
2. Sensitiveness to criticism.
3. Ideas of reference—applies all criticsm to himself (feels that "the shoe always fits").
4. Poor reaction to competition—takes defeat too seriously.
5. Is over-responsive to flattery.
6. Has tendencies toward seclusiveness.[1]

Almost all normal individuals manifest these types of behavior in varying degrees, yet few show extremes of abnormality in any one trait. Complete absence of such feelings is rare. Drives to action are very much the same in all individuals but differ in intensity. In spite of this variation in degree, it is typical of human beings to have feelings of inferiority and urges to excel.

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[1] Bagby, English, *Psychology of Personality*, pages 108–116. New York: Henry Holt and Company, 1928.

Individuals differ in their reactions to stimuli. Some tend to act immediately on impulse or on reception of perceptive cue. Others tend to reflect, to hesitate, or to inhibit overt activity to situations. More than average variations of the first type appear in the athlete, the business executive, the soldier, the social leader, the intruding salesman, and the manic-depressive (wild, active type of abnormality). Variations of the second type occur in the research man, the poet or novelist, the scholar, the hesitant, lonely, seclusive individual, and the schizophrene (shut-in type of mentally ill—almost completely oblivious to outside stimuli). The extremes in either case are unusual, almost atypical. The typical human is not extreme but manifests many responses in each direction.

Jung called the active types *extroverts*, and the studious, hesitant, or reflective types *introverts*. The great central group has been well named *ambiverts*. Most of us have our periods of activity and our periods of reflection, our periods of sociality and our periods of seclusiveness.

Another range in a personality trait is that dominance-docility range which Allport measures with his ascendance-submission scale. Again the central type is the rule. This boy dominates in his fraternity but submits on the athletic squad; or he leads on the athletic field and follows in social activities. More likely, he leads occasionally and follows at other times in most situations. He adjusts his behavior to the exigencies of the situation.

Who is too dull to learn? Morrison says: [2]

> Hope is bright along the pathway of an instructional system which in the end will make all normal men and women as civilized as the most fully civilized are today. . . . We must admit the reality of actual organic dullness at the level of normality. . . . But it does not follow that dullness, other things being equal, is necessarily an obstacle to complete *educability*. In other words it does not follow

[2] Morrison, H. C., *Basic Principles in Education*, page 442. Boston: Houghton Mifflin Company, 1934.

that there is any reality to the concept of *levels of educability* in the normal. The individual is not a vessel of *predetermined volumetric capacity.*[3] What does follow is that maturity may be deferred longer in some than in others just because learnings come slowly.

Morrison's views are encouraging with regard to human development. He does not refer to special abilities in the above views but to socialization, personality adjustment, a wholesome life philosophy, self-discipline, standards of moral conduct, manners, and cultivated tastes. He is referring to attitudes, dispositions, and behavior patterns, and not to erudition.

Adjustment to society in relation to academic aptness. There is much difference of opinion over individual differences in ability to learn. Much of the controversy is over the relative influence of inborn ability and of environmental factors as determiners of the intelligence. One view is that inborn intelligence determines almost entirely one's degree of success or failure in schoolwork and life. The opposing view is that environment is the controlling factor.

Bagley holds the latter view. He calls attention to the great influences on social evolution of the invention of writing and of the printing press. He says that "the greatest turning points of social evolution have actually been marked by improved methods of disseminating experience . . . of letting more light into common minds." Mr. Bagley believes education of the masses to a high social level to be possible, and to be necessary for social stability. His data seem to point to education as a highly effective influence on intelligence. He thinks the lower levels may be brought to a level of maturity resembling that of the more intelligent, through education.[4]

It would be unwise to conclude that training can overcome all of one's individual limitations, particularly in that aspect

[3] *Ibid.*, pages 436–437. (Italics are not used in Morrison's statement.)

[4] Bagley, W. C., *Determination in Education*, Revised Edition, page 38. Baltimore: Warwick and York, 1928.

called academic intelligence. It would seem to be justifiable, however, to take the view that better teaching techniques and more learning time may adjust many of the more limited—adjust them in the personality attributes necessary for adaptation to highly civilized society.

SIMILARITY IN PHYSIOLOGICAL NATURE

Ancestral similarities are transferred through the genes of the fertilized ovum. Additional similarities are fostered by the relative sameness of the *in utero* environment.

Man's form, structure, and organic specialization of parts seem to be predetermined partly by the genes of the chromosomes in the germinal material that initiates him. The fact that chimpanzees can not acquire language no matter how "patiently they are conditioned" [5] indicates the importance of certain "preconditions" in the germinal material. The fact the deaf person with no defect in vocal equipment does not acquire speech without very special training illustrates the importance of environmental stimuli.

Environment both shapes and fosters growth. The above illustration of learning to talk does not clarify the whole picture. Growth itself is both fostered and directed by environment. Environmental stimuli cause activity in human protoplasm, reduction and oxidation processes occur, and change occurs. Environmental stimuli cause growth by chemical changes in living cells. One must keep in mind the basic nature of protoplasmic growth. Griffith says: [6]

> It must be clear, also, that the properties or characteristics which distinguish a given piece of germinal material may be derived not from what it is as germinal material but from the nature of the environment in which it is placed.

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[5] Trow, W. C., *Educational Psychology*, page 430. Boston: Houghton Mifflin Co., 1931.

[6] Griffith, C. R., *Educational Psychology*, page 331. New York: Farrar & Rinehart Inc., 1935. See also Jennings, H. S., *Biological Basis of Human Nature*, pages 96, 133. New York: W. C. Norton Company, 1930.

Growth and learning similar processes. The process of change in the human protoplasm, known as growth activity, resembles to a great degree the change we refer to when we speak of learning.

Child says:

> . . . the organism has evolved primarily, not as a morphological structure, but as a behavior mechanism in the broadest sense.[7]
>
> . . . . . .
>
> Viewed in this way the whole course of development is a process of physiological learning.[8] . . . The individual from its beginning represents a series of reactions to external factors of a particular protoplasm.[9]

The beginning of motor adjustment to environment. Human cell stuff is sensitive to stimuli (irritable) and responds to stimuli by electro-chemical activity, by conductance away from the excited (chemically active) area to other areas. In the earlier stages this excitation is transmitted throughout the organism with decrease of activity in parts less related by structure. The innumerable random motor responses of the infant to chance stimuli illustrate this diffuse excitation. Coghill thinks that this general excitation precedes and furnishes the basis for reflex development.[10]

Adjustment by reflexes. Conditioned reflex learning characteristic of infant adjustment implies a type of adjustment in which general and diffuse response is narrowed down to a specific response to a specific stimulus. But this is exactly the same sort of process that occurs during the *foetal development* of reflexes. Holt says:

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[7] Child, C. M., *Physiological Foundations of Behavior*, page 236. New York: Henry Holt & Co., 1924.

[8] *Ibid.*, page 249.

[9] *Ibid.*, page 249.

[10] Coghill, G. E., *Journal of General Psychology*, vol. 3, pages 434–435. (Reprint of a paper read before the Ninth International Congress of Psychologists.) See also Coghill, G. E., *Anatomy and the Problem of Behavior*. New York: The Macmillan Company, 1929.

As soon as the embryo manifests movement, although inherited neural engrams are lacking, and the existing nerve tracts have developed only under the influence of functional gradients,[11] Pavlo's law of the conditioned reflex can begin to operate; the diffuse, random activity of the embryo, and not "heredity," being the indispensable condition for the formation of synaptic connections, or preferential pathways, in its central nervous system.[12]

. . . . . .

With Pavlov's law and the external anatomy of a baby in mind the reader can discover for himself the genesis of many of the earliest reflexes. . . . The principle is the same before or after birth.[13]

More complex behavior seems to develop frequently by a recombination of these preliminary reflex units. First, the general diffuse excitation and random motor activity seem to grow into a variety of small adjustment units. Later, these small units combine into the larger behavior patterns. Birth changes some of the environmental influences on the motor development, but not the nature of the developmental process.

In summary, human protoplasm, if stimulated by environment, grows into the adult human being; and the behavior patterns of this human organism will be whatever environment has fostered. It follows that similarity in the major environmental stimuli produce similarities in the major traits and characteristics of the human organism.

Growth a developing continuity. The human infant *in utero* goes through a continuous development process. Birth is just an incident in this development and not so important an incident temporally or developmentally as is generally supposed. It may occur at the sixth, seventh, eighth, ninth, or tenth month without breaking the developmental continuity.

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[11] Gradients: sequentially associated areas with decreasing intensity of electrochemical reaction—higher to lower metabolic rate.

[12] Holt, E. B., *Animal Drive and the Learning Process*, page 37. New York: Henry Holt and Company, 1931.

[13] *Ibid.*, page 39.

Calling prenatal specific patterns *reflexes* and postnatal specific patterns *habits* tends to imply a break in growth continuity that does not occur.

Because the physiological growth is more apparent in infancy, childhood, and adolescence and is prerequisite for the complexities and niceties of school and life development, one tends to think of education and adjustment as processes differing from this earlier development. All are, however, the changes in the organism resulting from environmental nurture.

Each successive change of the growth process is dependent on all preceding growth. Growth is not "mere accumulation." McConnell says:

> It [growth] is constant reorganization. The adult is not just a "big" child. The child is not a miniature adult. The growth process from infancy to adulthood is one in which the organism has an individuality and peculiarity at every moment of development.[14]

Doctrine of "natural activities." The preceding viewpoints of development are of particular interest to the physical education student because of certain advocated procedures in program building. The hypothesis has been advanced that physical education programs should be based on the so-called "natural activities" of hanging, climbing, carrying, lifting, throwing, running, and jumping. Perhaps a physical education program based on the skills of the Pithecanthropus might be to a considerable degree inappropriate for the needs of modern society. Such scientific studies as are available seem to indicate that the physical education program should be determined by man's needs in the world of today. In the first place, the germinal material (heredity) does not seem to foster specific neural patterns; hence, does not seem to

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[14] Skinner, C. E. (Editor), *Educational Psychology*, Revised Edition, page 22. New York: Prentice-Hall, Inc., 1945.

make any *specific* motor patterns easier to learn. In the second place, both interest in activity and acquirement of motor skill seem to depend on environmental stimuli.

McGraw has reported that one of the twins she experimented with was introduced to roller skates at the age of 350 days and acquired, at the age of 694 days, or less than two years, reactions which "consisted primarily of the broad rhythmical body sway that is characteristic of the professional skater." [15]

Swiss children have demonstrated that skiing may be acquired in mere infancy. Hawaiian children, among others, have shown that the swimming skill can develop at least as rapidly and as perfectly as the so-called "natural" activities.

Activities for success, respect, and joyous self-expression. Man seems to be limited in his development to whatever outcomes the environment fosters. It is the responsibility of the physical education teacher to see that activities of the environment foster growth, develop body-control skills, and generate energy supplies; and, if possible, to see that these activities furnish opportunities for success and for gaining self-respect and the respect of others. Moreover, they should furnish a means of joyous self-expression.

Growth, body-control, and energy are mere supplements to the other objectives and may be developed through many types of activities. The focus in activity-selection should be on whatever will bring the child success, respect, and joyous self-expression. The child must have guidance and help, with freedom to select from an environment rich in a variety of activity-opportunities.

Such is the nature-nurture process. The worm may turn into the butterfly, the egg into a hen, and the damp squirming infant, with its much greater susceptibility to environmental influence, into a human adult—an organism with potentialities beyond its own imagination.

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[15] Skinner, C. E. (Editor), *Educational Psychology*, Revised Edition, page 38. New York: Prentice-Hall, Inc., 1945.

SOME GENERAL DEVELOPMENTAL PATTERNS

Play. Perhaps the most typical characteristic of childhood is its almost incessant activity. Adults call this play. Morgan says: [16]

> In short, life is activity and whether that activity is work or play is not determined by the nature of the activity itself but by the attitude which the person himself takes toward the activity. The attitude is the result of habits which the individual forms.

Morgan thinks Gulick's definition is probably the best. It is: "Play is what we do when we are free to do what we will."

Play seems to be the term commonly used to describe the continual activity of the organism, the fact that, from intra-organic and from external stimuli, the organism is in a constant state of action, that life is activity.[17] Its causal factors do not seem to be explainable as the aimless expenditure of exuberant energy (surplus energy theory), the recuperation of our energy after it is exhausted (recreation theory), the functioning of instincts before the need for them arises (instinct theory), nor instinctive drives functioning in play to give the child training in things he will later need to do seriously (preparation for life theory).[18] Play, unless "spoiled" by incorrect supervision, is serious, intense, arduous, and fatiguing. The only difference between work and play is a difference in attitude.

Common emotional patterns. Emotions seem to originate from stimuli which initiate a state of hypertonicity in the smooth muscles and a general diffusion of excitation. They grow into specific patterns, both as to motor expression and

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[16] From John J. B. Morgan, *Child Psychology*, Revised Edition, Chapter XII. Copyright 1934. Reprinted by permission of the publishers, Farrar & Rinehart, Inc.

[17] See Dewey, John, "Play," in *A Cyclopedia of Education.* New York: The Macmillan Company, 1913.

[18] See Morgan, J. J. B., *Child Psychology*, Chapter XII, Revised Edition. New York: Farrar & Rinehart, Inc., 1934.

as to neural association. Environment encourages specific adjustments. Emotional maturity is evidently highly dependent on training. We find childish impulsiveness, sullenness, pouting, ridiculous fears and worries, anger outbursts, and adolescent sex behavior in adults of various ages. The frequency of such behavior points to very definite inadequacies in the general pattern of social environment.

Pre-adolescent development is characterized by the preponderance of sense-experience. The child at this age is interested in things. He likes to handle objects, to explore, to discover, and to manipulate things. Averill says: [19]

> His contacts with the world of experience are likely to have been helter-skelter and disorganized, and it is only natural that memories of them should be retained in a rather disjointed way. He remembers something about steam and something about percentage; something about frogs and something about Aesop's fables; Kipling and stars; ants and camels; George Washington and the pyramids of Gizeh; butterflies and electricity; static and caverns; orioles and locomotives—and the positions occupied by these ideational elements in his mind are often just about as topsy-turvy as the enumeration of them suggests!

As the healthy individual approaches the adolescent stage, he tends to be an exuberantly joyful, sensorimotor organism. He eats ravenously, sleeps soundly, and plays vigorously. His play is only half socialized, his mental activity nonreflective, and his morals opportune.

The physiological changes of the adolescent make him less vigorous, more awkward, more social, and more serious. Growth proceeds at different rates in different parts and organs of the body with some consequent maladjustment. Sex development adds its problems. The individual becomes conscious of his increased size, thinks of himself as an adult, and becomes less submissive to authoritative domi-

[19] Averill, L. A., *Adolescence*, pages 11, 12. Boston: Houghton Miffiin Company, 1936.

nance. He becomes more introspective, and inclines toward greater inferiority feelings. He is more sensitive to criticism. Personal appearance becomes important. Team games and group activities are preferred. He is ambitious, inclined to be spectacular, and romantic. People begin to replace objects in primary interest. The integrating of changing organic and glandular patterns into unified and balanced function comes slowly with accompanying emotional stress. Increased emotional tensions tend to express themselves in impulsiveness, fits of anger or moodiness, religious zeal, idealism, hero worship, or delinquency. Greater content and happiness tend to appear with physiological and emotional maturity.

Similarities in the adult. Conformity to customs, conventions, manners, and even style is so universal as to tinge man with monotony. Physically he typically possesses minor incoordinations of posture, and body-part control. He has his car accidents, hits his thumb with a hammer, or steps on his partner's feet. He is unlikely to be completely mature mentally, emotionally, or socially. He believes in courting luck, in accepting printed material as true, particularly if it agrees with what he believes, and in reducing mental activity to beliefs, habits, and slogans. He succumbs to flattery and dislikes truth which pricks his ego. He resents orders except from his admitted superiors, glosses over irritation with thin, almost transparent, courtesy, but gets along and is frequently happy. He maintains a reasonable degree of self-reliance and independence. And, in the light of his own mistakes, he plans an environment which he hopes will make his progeny superior to him.

SAMPLE TEST ITEMS

Yes—No

1. In almost all cases, will the measures of a single trait of large numbers of individuals be found to be distributed according to the normal curve?

2. Is an individual likely to be closer to the average on measures of combinations of related traits than he is on a measure of one trait?

3. Can humans be divided into distinct types in traits of personality?

4. Does it seem probable that man today is a superior organism at birth to that which he was ten centuries ago?

5. Does one's inborn intelligence determine almost entirely one's degree of success or failure in schoolwork and life?

6. Are there any noted educators who believe that the common masses of mankind can be educated to a high social level?

7. Is the degree of attainment of body control skills, such as we imply when we speak of grace, poise, and coordination, largely dependent on a factor of innate "motor intelligence"?

8. Is personality just the sum of all one's individual traits?

9. Are learning and growth much the same sort of physiological processes?

10. Do most authorities think that some specific nerve patterns are inherited from our ancestors?

11. Is there some innate condition in man which makes the natural activities more attractive to him than other forms of motor activity?

12. Do all normal individuals possess, to some degree, the same traits?

13. Can one assume that modern education has developed many individuals to the limit of their potentialities?

14. Does the nature of the activity itself determine whether it is work or play to the individual?

15. Is the only difference between work and play a difference in attitude?

16. Is rate of growth of the various body parts uniform during adolescence?

17. In general, does adolescent moodiness have a physiological basis?

18. Does the average adult typically possess minor incoordinations of posture and body-part control?

19. Is the typical adult emotionally mature?

20. Does the typical adult attempt to govern his own behavior by careful use of his reasoning abilities?

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Differences in Pupils

In the preceding chapter the development of the individual was explained as a continuous growth process. Environment was seen to react in conjunction with certain conditions represented in the genes of the germinal material. Attention was called to the importance of environmental stimuli on rate and direction of growth. The growth processes are the same in all individuals. However, individuals do not grow at the same rate. Neither do the separate traits within any one individual develop at the same rate.

Varying environments, both internal and external, different gene influences, and variation in growth rates in the various traits of each single individual are some of the factors which account for the uniqueness of any human organism. This uniqueness is a functional variation, a distinctiveness noted in the person's individuality. A trait or aspect of a personality is meaningless unless considered in its fusion with other traits. Just as oxygen combines with hydrogen to form a variety of compounds, so do the degrees of various traits combine in various individuals to form a variety of personalities.

It was pointed out that the normal curve represents the range and distribution of almost any human trait when large groups of individuals are measured. This curve points to the continuous gradation of any human trait from one extreme to the other. Typical individuals in any trait are those

in the "proximal vicinity" of the average (mean). Individuals who deviate from the average in either direction are fewer in number as the degree of deviation increases. The table following shows the large numbers grouped around the average and the relatively few with extreme scores.

CLASSIFICATION	I.Q.	SANDIFORD: [1] HYPOTHETICAL NORMAL POPULATION—PER CENT
Near genius or genius	Above 140	0.25
Very superior	120– 140	6.75
Superior	110– 120	13.00
Normal or average	90– 110	60.00
Dull, rarely feeble minded	80– 90	13.00
Borderline, sometimes dull, often feeble minded	70– 80	6.00
Feeble minded	Below 70	1.00

Growth varies in rate and in length of time it continues. Studies of individual differences indicate that traits do not reach their maximal growth at the same time; for example, one's height may reach almost its ultimate attainment before the rest of the body has gone through its later adolescent development period. One boy excels the average in strength in the developing period but tapers off sooner in his strength development. At adulthood he may even be below average in strength. This latter case illustrates the fact that different persons have different rates of growth and development; and the rate of growth is not a sure index of the final peak achievement.

Examples of growth variation. Some of these eccentricities in growth patterns may be made more clear by example. One's feet may grow faster than the rest of his body and reach their approximate maximum quite a while before growth in height is completed. Some persons' legs grow faster than

[1] Taken from Skinner, C. E. (Editor), *Educational Psychology*, Revised Edition, Table VIII, page 379. New York: Prentice-Hall, Inc., 1945.

their trunks and vice-versa. People of the same height have different lengths of legs, trunk, size of feet, length of neck, *ad infinitum*. The rates that the various parts grow vary from individual to individual, and the parts stop growing at different ages. Growing parts vary in rate from other parts of the same person; and vary in rate from that of the same part of other persons. These characteristics of growth difference apply to traits of personality, intellect, and organic development as well as to physique. The inability of the heart to keep up with the other growth accounts for some cases of adolescent heart difficulty. The inability of the body metabolism to keep up with physical and organic growth may account for cases of malnutrition, skin irregularities, lack of endurance, and the like, in rapidly growing adolescents.

Environmental influence on development. The evidence that environment may affect the growth of some traits more than others is abundant. A rural atmosphere of outdoor exercise, sunshine, and good food fosters physiological development; yet it may be lacking in much of the experience necessary for developing social maturity. Of course, rural areas do not necessarily lack adequate social environment. A variation might occur in skills. One research student found a group of farm girls whose measured back, leg, and grip strengths showed no relationship to their specific skill levels in the physical education program; yet the girls would probably have scored high on a social maturity test.

Urban environments tend to lack maximum stimuli toward physiological development. In any area, economic status may affect the nutrition, hence the physiological development. Home conditions and the neighborhood associations will have accelerating or retarding effects on desirable trait development, depending on their specific nature.

Relative rank maintained by many. In measuring groups, it has been found that the majority tend to retain the same relative rank in regard to each other as development pro-

gresses. The stronger boys tend to continue to be relatively stronger even though the lower levels are steadily increasing in strength. The faster runners tend to remain in their relatively high rank even after the lower ranks increase in speed. The same statement about relative group development applies to almost all human traits and characteristics. The relative rank varies with the trait selected, however. The individuals in the group who rated high in strengths might be in a large part different individuals from those in the group who rate high in speeds.

The value of such statements about group studies, group curves, and group averages is questionable if the teacher is concerned with the improvement of each individual. In attempting to classify high school students for competitive-sport participation, the problem of the large, heavy, and relatively strong boy who is physiologically immature, is well known. If we gather together pupils who are much alike in one trait, they tend to be dissimilar in other traits.

We must remember that mathematical descriptions of group averages are purely mental concepts. The groups are made up of individuals. Individuals are not made in identical molds. The school that averages three and one-half boys to every girl has no such individual division. Such statements seem absurdly evident; but individual pupils are still being diagnosed, prescribed for, and treated with the panacea of group statistics.

Individual-trait ranks are not revealed by group trends. It is true that the teacher tries to bring as many as possible of his students up to, or higher than, the set standard in basic skills. In addition, the teacher attempts to find those few traits in each individual in which development toward a still higher rank seems possible. Success, a high rank in some achievement in the competitive social environment seems to be a need of each individual.

Relationship between traits. Schwesinger says [2] that "the range within which hereditary tendencies may be varied by environmental factors is different for each characteristic." We do find some positive correlation between excellencies in traits, however. One who is good in English or History is more likely than not to be good also in Chemistry. One who seems to learn baseball rapidly is more likely than not to learn basketball or tennis rapidly. The correlation is positive but very low between motor excellences and mental excellences. Physique and intellect tend to show little relationship. Music, drawing, mechanical ability, art, and social aptitudes show low correlations with intellectual traits. Of course, these correlations refer only to group characteristics. Any particular individual may differ from a trend indicated by statistical study of a group.

Freeman says [3] that "mechanical ability or disability, barring sensory and motor defects, is due to environmental factors of personality, rather than to a special innate aptitude or ineptitude." Music seems to require certain natural aptitude. The structure of the basilar membrane of the inner ear and the structure of the vocal organs is thought to have some relationship to pitch discrimination and to voice timbre, respectively. Many of the so-called cases of special ability are directly attributable to a fostering environment, intense interest, and an extraordinary amount of effort toward improvement.

The range of variation in any trait changes in extent of spread with the trait selected. It has been estimated that in physical traits, among normal individuals, the best is about twice the worst. In mental traits, the best has been estimated

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[2] Schwesinger, G. C., *Heredity and Environment*, page 163. New York: The Macmillan Company, 1933.

[3] Freeman, F. S., *Individual Differences*, page 319. New York: Henry Holt and Company, 1934.

to be three or four times the worst. In specific traits much greater variation than this has been found. Hull found a ratio of 19 to 1 in his information test.[4]

Certain factors seem to affect this extent of range. The more complex the trait, the more variable it seems to be. Functional traits seem to be more variable than structural. Individuals differ more in their responses to symbols and concepts than to sensory or perceptual stimuli; and individuals differ more in strength of leg than in length of leg.

Social influences. Attention was called in the last chapter to the fact that certain social influences produced similarities. Conventions and styles, manners and customs, institutions and practices decrease individual variation in certain ways. Dictators strive for and thrive on conformity, submissive attitudes, homogeneity. Democracies are inclined to encourage individuality.

Effects of similar school experience. American education attempts to produce in all normal individuals certain desirable changes such as are stated in the *Cardinal Principles of Education.*[5] That this pursuit of the same basic curriculum produces greater likeness in individuals is not assured. Certainly all will be familiar with many facts in the same fields. But the brighter individuals learn faster than the duller, transfer more learning from one situation to another, and may display a greater absolute difference after like practice. The vocabulary of the brighter individual is larger. He reads more widely and understands more of what he reads. His greater knowledge opens to him avenues to learning and understanding of human behavior that are closed to the duller individual. Similar amounts of time spent in activity in a given field seem to increase the absolute difference range of

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[4] Hull, C. L., *Aptitude Testing,* page 73. Yonkers, New York: World Book Company, 1928.

[5] N.E.A., Commission on the Reorganization of Secondary Education, "Cardinal Principles," U. S. Bureau of Education Bulletin, 1918, 35: 11–15.

the individuals participating, unless the field is relatively simple.

Specialization versus breadth in education. The American student selects from a wide variety of electives in his school course, but he also specializes in a particular field. Specialization accentuates certain traits and fosters greater variability in such traits in comparison with the average. On the other hand, specialization prevents a wide variety of trait development; hence it is likely to produce less deviation than would greater breadth of development. The specialist remains in the proximal vicinity of the average in many of those traits not concerned with his speciality. He is an "average person" except in his specialty.

Differences in aptness for learning manifest themselves in innumerable ways. Individuals learn at different rates.[6] They begin at different levels and acquire skill or knowledge at different rates. The duller seem to vary less than the brighter. Those progressing at approximately the same rate may vary in the final level they can attain. There seems to be a hereditary upper limit. This hereditary limit may be overemphasized. The student of individual differences needs to note that *variation results from varying environment* and that *environment is never the same for two individuals.* Identical twins have the best chance of having similar environment, but even they have many unlike experiences.

Sex differences.[7] There are certain differences in the sexes due to biological nature and function and to differences in environment. Girls seem to mature somewhat earlier than boys, on the average. Boys average greater in height and strength. In general, the average man is superior to the

[6] The rate of learning must not be confused with the speed of performance on such a type of activity as taking a test. Recent studies have thrown considerable doubt on the old hypothesis that speed of intellectual performance (on an I.Q. test, for example) is highly related to level of intelligence.

[7] Ellis, R. S., *Psychology of Individual Differences,* pages 265–266. New York: D. Appleton-Century Company, 1929.

average woman in motor capacity. Women seem to excel men in sensory capacities except in the kinaesthetic sense. The average woman has better memory, particularly rote. Men tend to do better in tests of originality. All these differences are small and are differences in *averages*. Men show slight superiority, on the average, in reasoning tests, arithmetic computation, and mechanical tests. Women tend to show superiority in aesthetic comparisons, drawing designs from memory, and in linguistic ability. These differences are very slight compared to the differences *within* each sex. Environment seems to be the cause of this difference except wherein the difference is related to biological function.

Other differences cited, but for which there is little evidence, concern sex differences in emotionality, guidance by intellect versus guidance by intuition, pugnaciousness versus docility, greater industry on the part of woman, and so on. Studies seem to indicate that there are fewer women at the intelligence extremes, the so-called genius and feeble-minded levels. These findings can perhaps be attributed to environmental influence. Women are more likely to be cared for, are less strong, hence less dangerous; as a result, fewer are sent to homes for feeble-minded. At the upper end of the scale of ability one finds the woman competing against social custom when she excels in activities chiefly predominated by men. The world still remains very much a man's world. Environment probably accounts for the apparent predominance of males at the extremes of the intelligence range.

Age. There are progressive changes of growth rate with advancing chronological age. These changes account for some of the differences at various age levels. When unlike age is combined with different rates in growth per trait per individual, multiple individual variation is, of course, found.

Race. There are racial differences, but, where found, they are due to diverse levels of civilization and hence widely divergent environmental training. The home life, the language

difficulty, the economic and cultural status, and other environmental factors account for differences in average scores, made by people of different racial stocks, on tests manufactured in America or England and given by English-speaking peoples.

Feeling and emotion. Pupils differ in their susceptibility to emotional stimuli. This difference is what we mean by temperament. Temperament refers to the individual's sensitivity and characteristic reaction patterns to emotional stimuli. Some are very sensitive and deeply hurt by mild disapproval; at the other extreme one finds the boy who seems impervious to ordinary criticism.

The feeling tone which accompanies genuine interest (or perhaps is genuine interest) deviates widely from individual to individual. Interest fluctuates in any single individual. It seems to be affected by all types of environmental factors. Yet it is a necessity for adequate and economical learning.

Volition is a general word to describe one's decision upon a course of action and his initiation of the course of action. Innumerable words describe the wide variations in this trait. Individuals are classified volitionally as lazy, lethargic, impulsive, extroverted, determined, persistent, negativistic, suggestible, strong-willed, stubborn, bullheaded, vacillating, and so forth.

Character is another general classification of traits with feeling or emotional toning. It refers to patterns and urges of response to social and ethical situations. One's social behavior can be analyzed as to various social and ethical traits. For example, individuals differ in *degree* of honesty, selfishness, decency, responsibility, amicability, idealism, and so on.

The *urges to action* vary in intensity and vary in emphasis, from individual to individual. Some desire social approval greatly; others want power or fame, or money, or security, or sensuous pleasure. Even when individuals are experiencing promise of attainment of a desired goal, they vary widely in their response to such motivations. Gates comments on the

great difference in individuals in the degree of annoyance caused by thwarting of their wants.[8] There is a wide variation in characteristic type of adjustment. Some adjust by surrender, some by direct attack, by compensation, by rationalization, or by degrees and combinations of these and other adjustments.

Motor movements. Individuals vary widely in their various motor reactions. Experimentation has shown individual differences in reaction time. Individuals seem to vary widely also in maximum speed of movement after starting to react. Reaction time refers to the time elapsing *between the occurrence of the stimulus and the beginning of the response.* In running, slow reaction time is evidenced by slow starting. Speed of muscular contraction, *after the muscle is stimulated,* seems to appear in fast dash men in track who are slow starters. Length of stride is a factor, but there seems to be this muscular-contraction speed in addition.

Speed is not at all a unitary trait in man. The relative speed of an individual in comparison with any other individual varies with the task he is performing. One does not have speed but "speeds." He may rank high in speed among his fellows in certain types of coordinated activity and low in others. Some persons can run fast but change direction slowly. Others start quickly, cannot run so fast as many slower starters, but can change direction rapidly. Some people are quick with their hands but not with their feet, and vice versa. A person may climb a rope in near record time but trail the group in a sprint around the block. Some of these performance speeds seem to have been modified significantly by training.

Accuracy of performance is an important factor in many motor skills. The variation between individuals and the fluctuation in any one individual in accuracy are well known. Practice improves accuracy, but individuals vary widely in

[8] Gates, A. I., *Psychology for Students of Education,* page 209. New York: The Macmillan Company, 1930.

final attainment when the preliminary movements required are at all complex. Steadiness, automaticity of pattern, sense keenness, and physiological condition may be some of the factors. Certainly, emotional states affect individual accuracy in motor movement, although not always detrimentally. The variety of factors that affect the high skill and exact nicety of some of our sports movements is so great that performance is unpredictable.

Coordination in muscular movement refers to skilled movement. Coordination implies that separate muscles function in a harmonious action pattern. The individual movements are exact and are varied in strength to suit the total pattern. There is a nice balance between inhibited and released movements, and each muscle movement occurs in the right temporal sequence. The parts are synchronized into a functioning unit of motor behavior.

Individuals differ in degree of skill acquired; in degree of movement coordination. Probably no two individuals use exactly the same muscle groups for a complex action pattern. Persons vary in the timing of the part movements, in the relative strength exerted by the muscles reacting, in the tension of the inhibited muscles, and in the sequential order of the individual muscle movements. In such a relatively simple movement as striking a pitched ball with a bat, individuality of style characterizes even the experts. Professional basketball teams vary widely in foul-shooting stance and in the muscular movements of the act. Yet all are tossing a ball of little weight a short and constant distance, and almost all are highly successful in throwing the ball to where they intend it to go. Two Wimbledon tennis competitors of recent years consistently used two hands on the racket for backhand strokes. These are only a few examples to indicate variation in ways of performing like acts. Individual differences are so great in motor skills that a recommendation of *the correct form* for any complex motor skill is a questionable procedure.

Individuality. Individual differences allow for a unique-

ness, an individuality, a "personality" in the individual which distinguishes him. His face, his form, and his handwriting identify him as an *individual.* His voice, his stride, and even the sound of his footsteps identify him to his intimates. His footprints identify him in the maternity ward and his fingerprints in the police station. He copyrights *his own* ideas and patents *his own* mechanical contrivances. He is an individual entity with his own peculiar sets of habits, ideals, attitudes, and beliefs. His very individuality can foster itself by its interaction with environment. His counterpart is impossible even in his offspring. Hybrid as he is with interacting traits and characteristics of all degrees, his progeny must be more so. They will also differ from all other human beings, but not by the same amounts of differences.

SAMPLE TEST ITEMS

Yes-No

1. Does the normal curve apply to most of the individual traits of man?
2. Are there more "very dull" individuals than there are "very bright" individuals?
3. Do human traits reach their maximal growth at the same time in the individual?
4. Do individuals tend to maintain the same relative rank, in regard to each other, in any one trait as growth progresses?
5. Does this rank referred to in question 4 differ with the trait selected?
6. As a general rule, do one's legs grow at the same rate as his trunk?
7. Do specific body parts stop growing at approximately the same chronological age in different individuals?
8. Do excellencies in mental traits as determined in studies of large groups show a high degree of covariance; i.e., is a person who rates excellent in some traits more likely to rate excellent in other traits?
9. Do individuals vary more in mental traits than in physical traits?
10. Are functional traits more variable than structural?

11. Do similar amounts of time spent in learning activity in a given field tend to decrease, in the individual's participating, their absolute differences in that field?

12. Does specialization tend to produce greater variation from the average than breadth of development produces?

13. Do individuals with the same degree of interest learn at the same rate?

14. Do those who learn at the same rate tend to be the same in the final level that they can attain?

15. Do identical twins have different environments?

16. Do girls mature earlier than boys?

17. Is it probable that environment accounts for the predominance of males at the extremes of the intelligence range?

18. Does rate of growth in an immature individual vary at different ages?

19. Are race differences largely due to differences in environmental influences?

20. Do excellencies in motor traits tend to show a high correlation with excellencies in mental traits?

21. Is speed a unitary trait?

22. Is individuality in man a deterrent to his acquirement of adequate sociality?

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12.

Individual Similarities and Differences: Implications for Physical Education

GROWTH IS the essence of life, and the child is in the most rapid period of growth. He represents, therefore, the organism at its liveliest, most vivid, most active period. Each step in his growth is based on what has gone before. Growth is not a mere accumulation; it is a developing hierarchy. The extremely rapid growth of childhood, the diversity of this growth, and the dependency of this growth on specific environment for stimulus, all have implications in physical education.

How do we wish the organism to develop? Educators are unable to state the specific future needs of the child; hence education has stressed versatility. If the child is versatile, he is more likely to be able to adjust to changing conditions. This last generation has had to develop types of body control and skill not needed by preceding generations. With scores of thousands of people per year being killed by automobiles, the need for exact movement control, emotional stability under duress, developed peripheral vision, health habits, and knowledge of first aid, not to mention pedestrian agility, becomes apparent.

Airplane flying has necessitated the development of new coordinations between hand and eye, new discriminations in

body balance. Mechanized industry presents forces dangerous to the awkward employee. Recreational sports as a leisure-time pursuit are on the increase. Injury "dogs the steps" of the awkward individual who is participating in sports. The complexities of modern civilization make speed and precision of movement essential for both efficiency and safety.[1]

How can physical education develop versatility? The skills of adult life are patterns woven from the part movements learned in childhood. In the child, diffusion of energy from stimuli causes a tremendous variety of response. In the early developmental stages any movement may be attached to any stimulus. It is during this period that the child is learning the individual movements which are basic to skill acquirement. Observation of the activity of infants and children would lead one to think that they make almost all possible movements. But movements *fostered by the environment* are made more frequently and therefore become more subject to control. That the average person does not bring all possible movements under control is demonstrable. By practice, comedians learn to make ear, face, and scalp movements which are not included in the learned-movement repertoire of the average person. Dancers demonstrate body-part movements not available in the learned responses of the average person.

> The greater the variety of specific movements the child goes through in this early maturing and developing period, the more likely he is to possess the motor-movement equipment to fit well the numerous demands of adult life.

This statement implies a program of activities in the preschool, primary, and intermediate grades, characterized by extensive variety of muscles and body parts utilized. Normal

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[1] Skinner, C. E. (Editor), *Educational Psychology*, Revised Edition, page 144. New York: Prentice-Hall, Inc., 1945.

children should have at least four hours of vigorous physical activity daily. Williams says: [2]

> Educators are not in agreement concerning the purpose of education in the early years of school. They should step aside and permit those who do know to determine programs. The purpose is development of the child and the physical basis must come first.

Variety problems at the high school level. Motor abilities seem to be, to a large degree, specific to the activity. When physical education programs at the high school level are made up chiefly from a few of the traditional athletic games of America, they are likely to favor certain children over others. Not only are the favored children more successful in the physical education program; their successes give them a social status denied those children less apt at the particular activities.

Perhaps physical education teachers should supplement the program with a greater variety of activities. Then the majority could find activities at which they might excel. The three traditional major objectives, (1) body-control skills, (2) organic vigor, and (3) social attitudes and conduct, imply vigorous participation in activity involving a great variety of bodily movements. Group cooperative enterprise is indicated also; but not the requirement of a specific game proficiency such as is involved in football, basketball, or baseball. None of the three games mentioned seems to be a common recreational game of the majority of American adults; hence, the "carry-over" value is slight except for some spectator interest.

The three games mentioned are so much a part of the American culture that they are easy to make interesting. Many children can learn them by imitation of better athletes. All three games demand a vigorous type of activity, they are de-

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[2] Williams, Jesse Feiring, *Principles of Physical Education*, pages 118, 119. Copyright 1938. Courtesy of W. B. Saunders Company.

pendent for success upon group cooperation, and they seem to develop a great variety of body-control skills. Yet, complete domination of the physical education program by a few major sports defeats the purpose of *greatest developmental value to the greatest number.*

It is a little difficult to find the happy medium between (1) activities at which the individual may experience success because of above-average achievement in his social group, and (2) activities which are popular in the pupil's social environment and therefore possess adequate importance for social prestige. The pupils of high school age want to conform to the group. They are unwilling to strike out for themselves. They tend to be afraid of uniqueness and individuality lest such non-conformity affect their social status adversely.

Variety is essential. Teacher emphases are too often based on personal prejudice, college-indoctrinated beliefs, or selfish personal desires, rather than on pupil needs. Emphasis on specific types of activities may cause developmental malnutrition. Time has taught us that the stereotyped patterns of child development such as prevailed in the seventeenth and eighteenth centuries did not fit the child for life in an ever-changing environment. We know that such experiences did not foster a fullness of growth. It should be as apparent that a "survival of the fittest" sports program is not adjusted to the individual pupil. Teaching sports fundamentals for preliminary varsity sport experience ignores the fact that most of the individuals will not participate in varsity sports and that other activities might be more valuable. To insist on either a sports curriculum or the "natural activities" program, good as they both are, as the whole of physical education is educational myopia. The current educational fad is always likely to receive over-emphasis.

Extensive activity develops generalized habits. The preponderance of sense experience and the wide variety of inter-

ests of the entire preadolescent development make extensive rather than intensive motor training most adaptable to the pupil. He is not yet specialized in his interests. He will hang by his toes, juggle balls, walk rails, or perform balancing acts with equal fervor and intensity. Rhythms have appeal. So do hammer and nails, velocipedes and bicycles, hoops and kites, boats and rafts, swimming pools, bows and arrows, ponies and dogs. He should experience all these and much more. Muscles not used during the childhood stage appear in awkward and incompetent skill performance later. Likewise, early-formed wrong health habits crop up later as retarded development, illness, excess fatigue, lack of endurance, or physical defect. Even gentlemanly behavior and social ease evolve from social conduct automatized into unconsciously performed patterns by environmental direction during the elementary school age.

The *basic curriculum* in health and physical education should include:

1. Practice in personal health habits.
2. Practice in a tremendous variety of movements and simple body-control skills.
3. Practice in approved habits of social behavior.

Course of study essential. In order that the child shall have opportunity to experience wide variety, a course of study must be made out. Haphazard attack on a wide variety of activities would stress some and neglect others. Hence we see the need of a course of study and a graded curriculum. All types of activity are therefore assured of being utilized. It must be kept in mind that much of the child's vigorous activity is done outside of schooltime; and greatest profit will result from physical education if it takes advantage of this extra time by class activity which tends to continue outside school.

Pupil attitudes. All this practice must be arranged so as

to be real *play* to the youngster. Much play tends to be vigorous activity of the large muscle type. Play tends to be extensive and vigorous. Supervision (but not too great restriction) is necessary for greatest developmental profit. Suitable environment, equipment, and apparatus improve interest and lend some direction to the activities.

Safety. Supervision is also necessary for safety. Certain safety habits and skills are necessary for survival. Unsupervised children swim in dangerous places, climb and hang by precarious holds at great heights, or hang on to the rear of moving trucks and streetcars. They chase each other in front of moving cars, dare each other to do perilous tricks on the gymnastic apparatus, or play war too realistically.

Normal curve. The variability graphically pictured by the normal curve has certain implications. It reveals that the 60 per cent in the proximal vicinity of the average can take on the basic movement skill, health habits, and social conduct patterns which are fundamental to successful later development. The 20 per cent above this group surpass them in learning. The 20 per cent below need more time, different methods, and perhaps corrective or adaptive work.

The great middle group are not star athletes in high school. They need extensive intramurals. They need class guidance in skill acquisition for later expression on the playground. A regimen of health habits, social conformity in conduct codes, and emotional control should characterize their program. The basic body controls and balances make up their movement fundamentals. Similar recreations, similar social patterns, and similar vigorous activities produce group stability, solidarity, cohesion, and cooperation. Sixty per cent of the time and money should be spent on this central group.

Personality development. The fact that personality is a unity has many implications in physical education. The mental hospitals use manual activities, constructive projects, and physical exercises as therapeutic treatment. Success at

such activities seems to breed self-confidence. Physical activity seems to make the seclusive individual more extroverted, more social. Inferiority feelings seem to be partially abated by success in motor activities. Mere focus of attention on activity rather than on self seems to help. Success in physical activity seems to develop confidence and courage to attack other life problems. Embarrassment and conscious attention to skill performance, with the accompanying emotional tensions, seem to increase awkwardness. The timid, hesitant child forgets himself in the excitement of vigorous play. He exercises until his movements are less awkward, until they are habitual and hence not embarrassing. His emotional tensions are redirected, and he becomes more stable, more dependable during emotional excitement. He learns to preserve a greater degree of equanimity and normal behavior in spite of emotional stimuli.

Thus we see that the physical education teacher finds abundant opportunity to mold personality. He guides the timid and hesitant into activity and growing confidence. He finds needed successes for those with too great inferiority feelings. He allows the bumps of competition and the necessary cooperation of team play to modify the overaggressive. He dissipates needless fears and worries about health by presenting facts and exploding superstitions. Care of equipment, respect for the property of others, turnabout participation, acknowledgment of personal error, and personal responsibility for group success are examples of experiences valuable in character molding. The teacher gives the various students opportunities for leadership, for using individual initiative, for construction of new rules or even new games. Self-direction is encouraged.

Ability levels. Techniques of instruction must be adapted to the ability of the pupils. In physical education this ability depends on a great many factors. Previous training, health and vigor, habits of work, and level of maturity are all fac-

tors. The boy who has played tennis, other things being equal, can learn handball faster. The "only child" is likely to have had less game experience than the child with brothers and sisters. The less vigorous child plays less, hence has less experience and is at a lower level of development. Structural differences affect performance. Ability at any time is due to a combination of things.

Those of greater ability seem to be better able to transfer skill or knowledge from one situation to another. They need less demonstration and detail drill. More avenues are open to them. Many people are willing to help a "promising youngster." In the secondary school, the more mature, stronger, and more skilled individuals find varsity squads, trips, and games available to them, a field of experience denied those of lesser ability.

Those of less ability need more exact instructions, must be shown, and must be "walked through" new movement patterns. They have greater difficulty in identifying the movements needed in a skill. They need more repetitions, and greater guidance when confronted with new situations. Greater care must be taken to provide adequate motivation, to prevent discouragement and dislike for the activity. They cannot be "thrown on their own resources" with any certainty of further progress. Greater patience, more encouragement, greater kindliness must characterize the teacher's manner with the lower developmental levels.

However, an occasional individual of less ability seems to be driven by a tremendous urge to succeed. He practices in his spare time. He persists in spite of discouragement and mistakes. He welcomes criticism, practices long and arduously, and frequently raises his relative ability rank much higher among his fellows. These occasional examples of what strong motivation will do, reveal possibilities of widespread improvement in instruction by greater teacher emphasis on interest.

Age and maturity. Age differences imply different ma-

turity levels. An individual may have a mental age of 15 and a physiological age of 10. Actually, age in years (chronological) is a very crude measure of the physiological maturity of childhood and adolescence. The chronological age of attaining puberty varies about three years in the central 60 per cent. Large school systems frequently discover a range of seven years in age of arrival at puberty. Heredity, racial stock, rural as contrasted with urban life, amount of outdoor activity, and type of physical education, all vary the level of development of the individual at any one time.

If we mean by "age," the *level of maturity*, we should have a *physical education age* for classification purposes. Unfortunately we have no means of measuring or classifying pupils according to their average developmental level such as is found in mental measurements. Anatomical age (as determined by X-rays of the amount of ossification of the carpal or tarsal bones) is one of the better classification measures. If the data from height, weight, and anatomical age measures are combined with the rating of a group of experts on skill and bodily coordination level, reasonably accurate developmental grouping may be made. The average teacher has not the time, equipment, or sufficient number of pupils to make such a classification.

Maturity classifications advisable. Large junior high schools that insist on including rugged and strenuous sports in their activity programs are obligated to make some such classifications. The practice of actually eliminating the weaker ones by competition is too costly in overtaxed bodies, injured joints, and seriously retarded development. Crude classifications can be made by combining such factors as height, weight, strength, chronological age; and such measures of physiological maturing in the boy as increased growth of hair on the face, lower voice pitch, and thinner, more rugged facial contour. Developed breasts, increased width of hip, and menstrual periods are similar indices in the girl.

Degree of intensity, the problem in adolescent sport partic-

ipation. The period of puberty and adolescence in the girl is not so trying and dangerous as has generally been supposed. Girls should have normal healthful exercise, outdoors as much as possible; a balanced activity program which takes into account both the need of energy for growth and the inequality of the sexes in strength; and some additional health guidance. High standards of strenuous physical skill acquisition should not be stressed for either boy or girl during puberty and adolescence, and particularly during the earlier stages. Herein lies the danger of interscholastic sports with the accompanying social pressure toward ever higher achievement.

Sex differences in activities. Need for differences in the programs of the sexes has been overemphasized. If the above-mentioned difference in strength and the need for moderation are kept in mind, the adolescent programs may be somewhat the same. Averill perhaps takes an extreme view when he says: [3]

> For the latter [the modern girl], on the other hand, there are as many legitimate means of expending the surplus energies of early and middle adolescence as there are for the boy. Organized games, moderately strenuous athletics, hikes, outdoor sports, dancing, and the like, satisfy her bodily needs as completely and with substantially the same degree of adult approval as her male companions are accustomed to enjoy. And this is precisely as it ought to be. Not only do good health, vitality, and a general exuberance of life result from moderately strenuous and regular exercise of the physical organism, but quite as important as these qualities are buoyancy of mind, many-sided interests, social satisfaction and general psychic elation which are the inevitable contributions made by motor expenditures during the years of adolescence.
>
> The factor of sex may be largely disregarded as far as the athletic program of youth today is concerned. Indiscriminately, often together, pubescent girls and boys play baseball, tennis, volleyball, basketball, soccer, hockey. They compete in track activities; hike unbelievable distances, and return in surprising freshness; partic-

[3] Averill, L. A., *Adolescence,* page 52. Boston: Houghton Mifflin Company, 1936.

ipate in apparatus work in the gymnasium and on the playground; ride horseback, row boats and paddle canoes; bowl and dance; practice archery; pitch quoits; play croquet and golf.

Age of greater variability. The junior and senior high school are periods of most common error in activity selection and method. During this period, greater variability appears in growth patterns. Authorities differ as to whether there is a great spurt in various growth rates at adolescence. Brooks [4] concludes from the summary of his own and other studies that there is no general sudden spurt, although there are "individual exceptions" to the general rule. Many authors uphold the contrary view. Difference of opinion also occurs in regard to whether or not this period is characterized by greater clumsiness and awkwardness. Some studies seem to show continuous improvement in dexterity and motor skill as a group characteristic. On the other hand, many authorities think that motor incoordinations increase temporarily during "growth spurts" of pubescence and adolescence.

The physical education teacher need not be disturbed by this controversy. He knows that there is an increase in variability, and therefore, a need for greater attention to the individual. Group generalizations are of little value to the teacher when the variability of this group is very great. Neither the boy who is growing six inches in a year nor the boy who is growing less than an inch in the same time conforms to group characteristics. The average height increment in the faster growing years is between two and two and one-half inches. The boy who is growing six inches is atypical in his awkwardness and skill maladjustment. The boy who is growing less than an inch per year is atypical in his lack of awkwardness, in his coordinated control.

Stages of development. The continuity of the development

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[4] Brooks, F. D., *Psychology of Adolescence*, page 449. Boston: Houghton Mifflin Company, 1929.

pattern makes artificial any attempt to classify it into stages. For the purposes of instructional emphases, certain divisions have been made. These are based partly on developmental need and partly on interest. The preschool and primary grades have been characterized as the docile age. In the nursery school and on into the kindergarten, the child tends to respond to the "strongest" stimuli. Novelty, noise, movement, material for construction, for simple patterns, for locomotion, have their appeal. Adults have cared for him and satisfied his desires to date; hence he is responsive to adult suggestions. Variety of movement without complexity of requisite skill should characterize activity at this stage.

As he grows older, the child finds that suggestions of adults do not always conform to his chief interests. The ninth to twelfth years have been characterized as the individualistic years. He wants to decide for himself. He is neither suggestible as to type of activity, nor inclined toward the cooperation of team activity. He quits the side that is losing and allies himself with the winner. He participates vigorously in "natural activities" but is not yet ready in strength or interest for complex team games. If encouraged he may develop considerable initiative and originality in activity invention at this stage. He enjoys making up his own activities, making his own rules, and creating much of the meaningfulness of the activity out of his own imagination.

Much has already been said about the social nature of the high school age. Team games, social dancing, coeducational activity, and recreation belong here. The team games should be adjusted to fit the child's strength and endurance. Long-distance running, football, and highly competitive basketball may overtax his strength, impede his organic development, or rob his system of energy needed for growth. Careful health examination, individual clinical records for observation, avoidance of social pressures on competition, and homo-

geneous height, weight, and physiological maturity classification (for the purposes of competition) are some of the essential features of the sports program at this age level. Because of individual variability, false generalizations may be drawn. There will be many postpubescents in most large junior high schools, and some physiologically mature individuals in most large senior high schools. To judge the strength and endurance of the average by this atypical group, to set up an activity program based on the stage of development of the upper 10 to 20 per cent, is not only unscientific but extremely hazardous to the future health and development of students.

There has been some tendency to conclude that the junior and senior high school age is an age of less vitality, energy, and endurance than the preceding years. The contrary is true. But because the student now seems to be more mature, and because he participates in many adult activities, we are startled when he shows evidence of being immature, weak, easily tired. He is stronger than the prepubescent and may participate safely in a more vigorous program. But he is large physically, has many of the social mannerisms of the adult, and we begin to expect much greater accomplishments from him. We would never have expected as much from the soprano-voiced, childish appearing individual only two years younger chronologically. The differences in rate of development of different body parts add to the confusion. The difference in relative rank of various trait developments increases the difficulty of approximating his developmental level. For example, the large boy (height and weight) may be completely mature physiologically, or may be a prepubescent. Yet because he is 5′ 10″ and weighs 160 pounds, we expect him to be mature socially and emotionally. Physical appearance is insufficient data for classification as to maturity level or fitness for an activity. Even the boy's mother may be fooled. She wisely cautioned him a year or two earlier

against overexertion. But now he is taller than she and heavier. He is stronger. The "big strong boy" seems to her to be ready for the activities of an adult.

Administrative adjustments. School systems may make administrative and instructional adjustments to the wide variability of individuals within each grade group. The administrative features have to do with equipment and apparatus, special teachers, and variety of activities offered. Playgrounds available for extracurriculars, pools for out-of-class swimming, facilities for riding clubs, bicycle clubs, hiking clubs, and the like, may be provided. A wide variety of intramural and interscholastic sports may be made available.

State school-attendance laws have steadily increased the heterogeneity of the secondary school population. As variation in individuals increases, types of needs increase. The future manual worker does not need the same type of physical education as the office worker or the professional man. The boy who is dropping out of school does not need the same type of training as the boy who is going on to college.

Quality adjustment. The teacher may make adjustment within his classes by requiring different quality of work from those of different abilities. The more vigorous may participate longer or more intensively. If the squad organization is used, the teacher may select squad leaders who excel; and may have squads of any particular level of ability participate with others of similar ability. Participation with those of better ability has certain advantages for those of a lower ability. They can see more nearly correct performance and learn somewhat by imitation. They have goals set for them which they can see and aspire to reach. Sometimes they can get points of instruction from associates that they cannot get from their teachers. Requiring better performance of those of better ability is a common instructional device.

In addition, some schools put the better students on an elective basis whereby the student participates in activities outside,

or in class, but on his own initiative. For example, varsity sport and intramural participation may be substituted for part of the classwork of the more proficient. Many intramural directors organize A, B, C, and D leagues to take care of the participation of the various ability levels.

Quantitative adjustment. Another method frequently utilized to adjust to various levels of ability within the class is some sort of quantitative adjustment. Those who show by tests and demonstrations that they are superior are expected to participate in a greater variety of activities, learn more skills, and acquire more knowledge than the average. Likewise, the average are expected to take up more activities than those less advanced in development. The slower members may learn only one activity during a stated time, the average two, and the superior members three or four.

Time adjustment. Another possible adjustment, which is not in common use in physical education, is a time adjustment. Athletic coaches are aware that a boy may become a skilled athlete years after others of his group, chronologically. Persistence in practice over a long period in an endeavor to acquire a varsity sport level of skill must be an individual and voluntary effort. On the other hand, it is only in accordance with educational policy in other fields to require the awkward, extremely unskilled youngster to spend more time in physical development. Cumbersome, awkward movements are an embarrassment and a handicap in life. Another year or two of required physical education should be of infinitely more value to such a youngster in adult life than a required reiteration of the much less used skill of expressing himself in writing, for example; and we leave it to the reader to compare its value with the value of a reiteration of the wanderings of Aeneas.

Homogeneous grouping is a much advocated method of adjusting to individual differences. Let us remember the different relative ranks of individuals in different traits and their different rates of learning in each trait, plus the difference in

this rate from that of other individuals. Then let us ask ourselves whether we intend to group our students homogeneously for:

1. Organic vigor.
2. Strength.
3. Any particular skill.
4. Health.
5. Anatomical age.
6. Endurance.
7. Social conduct and attitude.
8. Interests.
9. Needs.
10. Improvement.

These are only a few of the possible classifications. If we classify them homogeneously for one, they are very likely to be heterogeneous for most of the others. A good procedure for regular classwork seems to be to classify according to the normal social group; then subdivide with varied activities and student leaders.

Statisticians have called attention to another fallacy of homogeneous grouping. Such grouping is usually done by cutting the normal curve in three parts. Note the lack of homogeneity in the peculiarity of the two end sections in Figure 6. And keep in mind that the individual changes his position in the normal curve with each trait under consideration.

Individual instruction. The good teacher will supplement his classwork with as much individual instruction, conference, tutoring, and demonstration as he can find place for in his limited time. In the dressing room, on the playgrounds, after school, in club activities, he can give specific suggestions to individuals. Rating sheets and tests offer opportunities for individual diagnosis and suggestion. The instructor may intersperse suggestions to individuals during the course of, and without interruption of, the activity. Rest periods may also be utilized for suggestions. By taking advantage of such opportunities for individual instruction, the teacher may partially adjust the activities to the individual—and thereby solve

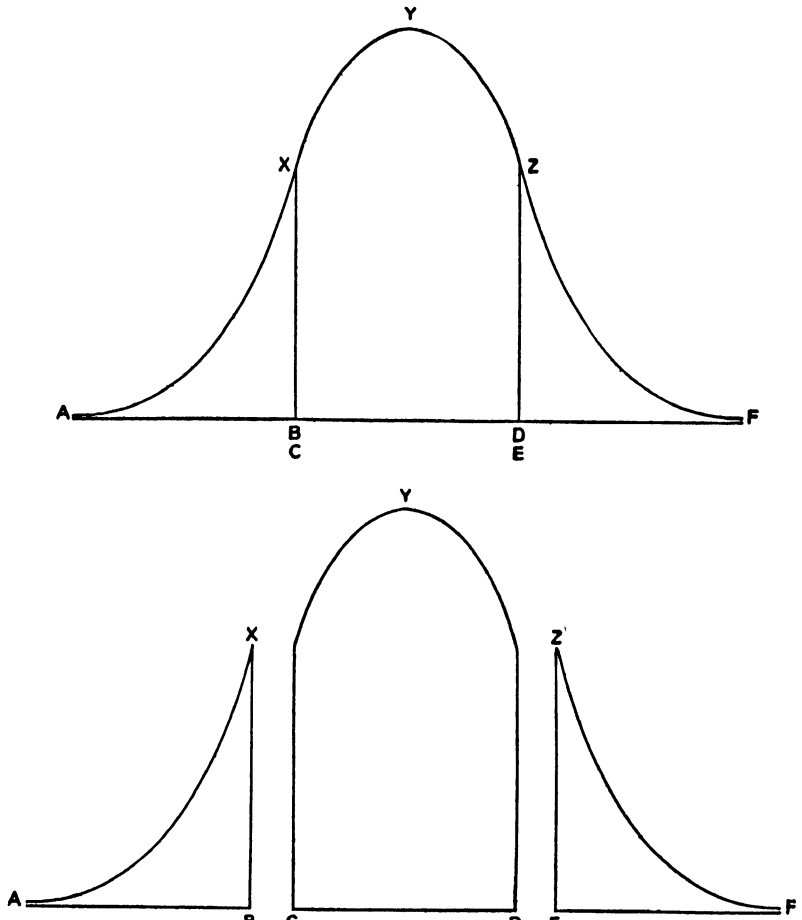


FIGURE 6. NONHOMOGENEOUS NATURE OF CURVE SEGMENTS

many of the instructional problems underlying group instruction of what are of necessity heterogeneous groups.

SAMPLE TEST ITEMS

Yes-No

1. Does education stress specific training for specific future needs?

2. Has the need for speed and precision of movement decreased as the world has become more highly mechanized?

3. Does it seem advisable to limit the activity of the youngster in primary grades to a practice of such skills as adults are now using?

4. Should coeducational activities replace present physical education activities in some junior high school classes in which the sexes are separated?

5. Are courses of study essential in elementary physical education?

6. Should class activity in physical education be of such a nature that the children will tend to continue similar activities after school hours?

7. Does the child need *vigorous* play?

8. Has the teaching of safety a place in the physical education curriculum of primary grade children?

9. Is there justification for devoting a large part of the physical education budget to the development of boys who show promise of unusual ability in motor skills?

10. Is physical education activity a contributor to mental health?

11. Does physical education offer great opportunity for teaching personality adjustments?

12. Should the same teaching techniques be used on the various ability levels in any one physical education section?

13. Can one learn all he needs to know in physical education by participation in sports?

14. Are height, weight, and chronological age adequate as measures of physiological maturity when classifying for participation in "contact" sports?

15. Is it advisable to set up high standards of strenuous physical skill acquisition for adolescents, with accompanying social pressure toward the attainment of these skills?

16. Are "buoyancy of mind" and "psychic elation" possible products of physical education activities?

17. Are generalizations as to group needs of great value to the high school physical education teacher?

18. Does the intermediate grade youngster, on the average, seem to take on more of the characteristics of the individualist than the primary school child possesses?

19. Might it be justifiable to increase the required time for the awkward youngster in physical education activities?

20. Can physical education students be grouped homogeneously as to their present level of attainment of the major objectives?

PART IV REVIEW TEST ITEMS

Below are two columns of words. Those in the left-hand column are numbered. Place a given word's (or term's) number opposite the statement (in the right-hand column) that most closely corresponds to the meaning of that word. Grading plan: Number correctly matched.

WORD OR TERM TO BE DEFINED	NUMBER	STATEMENT
1. "Natural activities"		Tending to group about the typical
2. Normal curve		"Racial motor memories" thought by some to be inherited neural patterns
3. Central tendency		Frequency distribution of human traits
4. Vicarious experience		Ability of individual to persist in self-directed activity toward predetermined goals
5. Social heritage		Conduct according to group mores
6. Socialization		Social deportments
7. Self-discipline		Tendency (emotionally toned) to act in certain way in response to a set of associated stimuli
8. Moral conduct		Change toward improved relationships with others
9. Manners		Profiting from the experience of others
10. Attitudes		The current stage of social evolution
11. Erudition		Ability to adjust adequately to the problems of daily life
12. Intelligence		Scholarly learning
13. Atypical		Aggressivenes—submissiveness range

WORD OR TERM TO BE DEFINED	NUMBER	STATEMENT
14. Extrovert		Person whose interests are mainly directed toward oneself and on reflection
15. Introvert		Person whose interests are mainly external and social
16. Dominance-docility range		Deviating to an extreme degree
17. Maturation		Process of attaining state of complete development
18. Play		"What we do when we are free to do what we will"
19. Correlation		Deciding on a course of action and initiating the action
20. Range		Variation together; going along together
21. Compensation		Improvement in an organism's relationship to its environment
22. Rationalization		Interval between and including highest and lowest values in series of data
23. Adjustment		Covering an undesirable trait by exaggerating a desirable one
24. Volition		Making up reasons to conceal true reason

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V.

How Does the Pupil Learn?

13.

The Nature of Motor Learning

Nature of learning.[1] Learning is changing. Yesterday, the child touched the hot radiator and burned his hand. Some change, in addition to the tissue injury, occurred in him. We know that a change occurred because today we see him avoiding the radiator. Some connection between sense organs and muscles has been changed. The sight of the radiator, its nearness, and the warmth coming from it form a pattern of stimuli which arouse a motor response of avoidance.

Learning may imply either a process or an achievement. One may look at learning as a process of changing. Teaching is concerned with facilitating this process. One may also consider the probable, or actual, resultants of such processes of change—objectives, goals, and outcomes. One may take lessons in dancing and say that he is "learning" to dance. He may practice "serving" a tennis ball or "putting" a golf ball under expert direction. *He is learning.* After so much practice in each of the above, he says he *possesses* certain motor learning; *i.e.*, ability to dance with reasonable skill, to serve a tennis ball so that it lands in the right area and is difficult to return, to tap the golf ball so that it rolls, for the shorter distances at least, into the cup.

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[1] Woodworth, R. S., *Psychology,* Third Edition, Chapter X. New York: Henry Holt and Company, 1934.

Motor Learning is usually defined as learning in which bodily movements play a major part. These movements are patterns of responses to recognized stimuli; *i.e.*, they are perceptual-motor responses. The recognized (perceived) stimuli may be visual, kinaesthetic, auditory, or any other sense stimuli or a combination of several. The learned response may be simple or complex, persisting over a time or relatively momentary; and much of the motor response may be inhibitory response. Think of the inhibited movement essential for marksmanship, balancing acts, or any skill requiring steadiness and fineness of control.

Highly skilled motor performance seems to be, to a large degree, automatic habit-performance. The sports and games themselves demand almost constant variation in skill sequences and combinations. The performer keeps his attention focused on the perception of cues for the next appropriate behavior while he is responding automatically to cues already received.

He gets the cue for the next appropriate act, shunts it into the custody of automatic performance, and watches the changing panorama of the game for the next cue. There is probably a low level of diffused attention over the general pattern of the movement patterns, although the details are, for the most part, completely absent from his consciousness.

The motor patterns he uses are not exact repetitions even when they are the same general act. In other words, his automatic performance is adjustable in details. It is somewhat generalized to fit slight variations in the total situation. For example, his batting pattern adjusts while he concentrates intently on the rapidly approaching ball. His feet, body stance, and racket stroke adjust while he focuses intently on the tennis ball. He dribbles the basketball and changes rate or direction while he is centering his attention on teammates down the floor ahead of him, estimating their speeds and their distances from opponents.

Learning by repetition. Motor learning does not seem to be a process of repetition until habit is formed. In mental learning we may repeat associations until recall together is almost instantaneous and involuntary. "The sum of five and five is ——" presents an example of association repeated until the reader involuntarily fills in the blank space mentally. The spelling of these words as I write them is a similar example. In motor learning, however, we repeat *wrong* responses (although they are not exactly the same successive wrong responses) in order to learn correct responses. One "shoots" a basketball in an attempt to "make a basket." As a beginner, he "shoots" unsuccessfully a great many more times than he "shoots" successfully. At a medium range, the beginner is unlikely to "make a basket" more than 10 per cent of the time. It is apparent that he obtains nine times as much practice in missing the basket as he does in hitting it. Can we conclude, therefore, that he learns by repetition and will increasingly improve in "missing the basket" while trying to "hit it"?

Very apparently such a conclusion is absurd. What one seems to do in learning a motor skill is to try and fail, change his movements a little, try again, and so on. Motor learners continually revise their methods of performance and gradually seem to hit upon procedures that are successful a greater percentage of the time; or that more nearly approximate the goal they have in mind.

Motor learning is generalized. Motor learning seems to be a change in general form of behavior; for example, the boy learns to throw a basketball into a basket in a variety of situations, none of which are identical with his original learning situation. Distances vary, backgrounds vary, baskets and backboards vary, opponent techniques vary, the basketballs vary, and the boy varies in physiological functioning. True, there is some variation in efficiency of performance with variation in the above factors, but the variation decreases with

thorough learning. As in other forms of learning, emotional states seem to be the most influential in varying functional efficiency.

The act of shooting a basketball into a basket seems to be capable of becoming a generalized habit set off by a very few cues in a total stimulus pattern. The "set" of the competitive game, the possession of the ball, and the momentary relaxation of an opponent may "set off" the pattern of shooting. The form of the movement, its rate, relative strength, and complexity vary with the situation.

Let us follow up this statement of generalized motor habit with other examples. We learn to walk and then adjust our walking to the terrain. We learn to ride and then adjust our riding to the horse, pony, mule, or other animal. We learn to hit a tennis ball with a racket, and adjust much of the habit to table tennis, badminton, or handball. The baseball player must hit the ball in spite of the variety of pitchers and the eccentricity of their deliveries. All forming of motor patterns seems to be of this *generalized* nature—not a specific chain response to an exact stimulus pattern. Just as the arabic numeral "2" applies to twins or parents, dice or double fouls, so does a throwing movement adapt itself to a ball or a stone, a javelin or a trout line.

Motor learning is pattern learning. We noted in an earlier chapter that ability to make almost all of the specific movements one performs is attained during the preschool and primary school development. When, for example, a secondary school student tries to acquire the skill of curving a baseball, he does not need to learn new individual movements. He already possesses the needed individual movements, but he does not know which of his available repertoire of movements should be selected and fused into the new pattern. He can grip the ball with his fingers; he can make the throwing movement with his arm; he can draw his body back and thrust it forward; he can "snap" his wrist. He resorts to "trial and

error" in an attempt to determine exactly which movements are needed. And he does not know how to put together the movements he finally "hits upon as best fitting." The exact timing of each movement in the pattern, the amount of strength per movement, and the fusion of these movements with the requisite strength and correct timing into the *unity* essential for skilled execution—these are further problems. Wrong selection of movements may throw too great strain on his arm. Correct selection may depend upon careful development of needed strength in part movements. No one can tell the individual exactly how *he* should throw a baseball. If major league baseball managers could give such explicit directions, they could save themselves great economic loss. A quarter of a million dollars was paid recently for a pitcher whose arm did not withstand the strain of the ensuing season.

Some factors in choice of form. The individual often adopts a form by imitation. However, there is a diversity of forms among the experts to whom one might look for a model, particularly in the details of their work method. Novices are apt to imitate the mannerisms of an expert rather than his performance of fundamentals. The teacher may study the individual pupil, then impose a form for the activity on him, permitting certain individual adjustments as practice progresses. Any individual's purpose will change his preferred form. If he wants beauty, grace, and apparent ease, he adopts a certain design of performance. If he is chiefly concerned with the end-result (say in basketball scoring), he is likely to use a somewhat different form. If he is greatly concerned about economy of motion and energy, perhaps because of advanced age, individual lack of endurance, or even the extreme strenuousness of the type of activity, he will make suitable variations in the form used.

Smooth-flowing, graceful movement is not necessarily the most economical of energy. Let a human attempt to emulate the graceful walk of any member of the cat family and he will

find that considerable additional movement is entailed. The feet are picked up and set down with a graceful, sinuous continuity of movement that requires extra effort. Contrast the energy output of the jump into the water with that of the graceful swan dive. The balance, the poise, the control, the exactness in tension in both the contracting and the antagonist muscles of the expert dancer require great amounts of energy. Only the finely trained athlete has the endurance for such truly graceful performance.

Endurance versus strength. Muscular endurance seems to be relatively specific to the type of activity. It does not seem to carry over to another activity to a great degree unless there is great similarity in the movement patterns. Endurance is sometimes confused with strength. Muscular endurance means the *ability to persist* at the activity whereas strength merely refers to the *initial contractile pull* of a muscle or muscle group. One can keep the two aspects separated if he thinks of specific strength as what would be registered by one slow maximum pull (slow to minimize the factor of acceleration) on a spring balance; and specific endurance as the number of times the pull could be repeated without excessive fatigue or the length of time the maximum pull could be maintained. It is readily seen that a strength score is specific to the muscle or muscle group functioning. Specificity also is true of endurance. Of course, each is affected by associated physiological conditions and intensity of motivation.

Characteristics of beginners. The learning process of the individual in the early stages of acquiring any particular skill pattern is characterized by variety and diversity of response. The entire body tends to increase in muscular tension. The energy released by the stimuli flows out into the innumerable movement equipments of the individual. Random and inappropriate movements are frequent. Emotional intensity is likely to accompany the learning. This emotional energy releases much nonapplicable movement and, in its extremes,

may inhibit applicable movements. The hesitancy and timidity of the beginner may be so great as to interfere seriously with his learning. The difference between the mild amount of emotional energy which will drive an individual to surpass his previous performance and attain a higher level of achievement, and the amount which "freezes him up," gives him the "jitters," or seriously interferes with his performance, may be very little.

Beginners have not had the conditioning process which produces negative adaptation to extraneous emotional stimuli. The teacher is well aware of how visitors may upset pupil performance. If, however, the pupils are in a more advanced stage and have had previous experience in performing before strangers, the smaller amount of emotional stimulus may actually improve performance.

Teachers must keep in mind the greater fatigue accompanying the early stages of learning. This fatigue is due to: (1) greater number of actual movements made in performing the act, (2) additional emotional tensions and consequent sapping of energy, and (3) greater physiological fatigability of the untrained body. The beginner makes a greater number of movements in accomplishing the same task than does the trained person. The beginner has not yet learned to eliminate the unnecessary movements. His tensions prevent the relaxation of body parts not in use. His circulatory, respiratory, and elimination mechanisms are as yet unadjusted. His energy stores may not be so available, and his metabolic processes not yet adjusted to the higher tempo.

The general idea. One must have the gross pattern of movement as clearly in mind as possible. Observation of skilled performance by others, of demonstrations by a well-trained teacher, of movies of the skill performance, plus verbal guides, illustrations, and the like, all help in this general orientation. With this "directional set," one proceeds with a slow, continuous action in conformity with the mental

construct of the movement pattern. This unit of action should be as large as can be carried through as a continuity. The early attempts will of necessity be slowly performed. This slow rate gives time for the attention to be diffused over the total design of the movement pattern and for the general framework consciously to be visualized. The focal point of attention even in the beginning stages is directed toward perception of cues for action rather than toward body movements. A *gross* error will stand out (or should be pointed out by the teacher).

There are various other methods of motor learning, such as, for instance, the detailed-drill-on-parts method—the analytical approach with the knitting together of the parts occurring later. However, the technique discussed above, of *beginning with a total unified pattern,* is the way children usually learn in their free play and in their imitative attempts at reproducing the performance of experts. This unit approach is recommended as the most rapid way to acquire an automatic habit-performance. The child was correct in his unawareness of, and little concern for, detailed errors. The detailed errors can be left to drop out unconsciously, or to be eradicated by careful polish in the advanced stages—the stages wherein the whole is so unified that any part-practice is really whole-unit practice because the rest of the pattern is continually filled in by memory. The part has become undetachable from the whole in significance and meaning.

The child's learning is the key to early teaching techniques. The child does not speed up his performance rate so fast that performance is upset. He plays at an easy rate with completed patterns, no self-analysis, and without great emotional pressure for perfection. He plays at the rate at which he can succeed with others whose rate is comparable.

Playmates improve together. Their movements change and readjust as their speed of performance increases. In time they are far enough along in automatization of habit to

endure the techniques of the part-learning specialist and detail analyst without retardation of their learning. They are at the stage where polish of their "weak spots" is an advantage. They are far enough along to stand the pressures of "survival of the fittest" coaching for the "varsity" without letting the accompanying emotional strain upset their automatized patterns and their rate of progress.

Great emotional concern for perfection of performance, if applied too early in the learning process, tends to retard learning. Putting the boy "under fire" too soon may do almost irreparable damage to his learning of that activity. However such experience is invaluable in the later stages. It seems to "set" the patterns, generalize them for wider application by appropriately readjusting details, accelerate the fusion of skills into even larger units, and supply additional energy to produce higher peaks of performance.

In the field of sports, no kind of practice seems to replace in value actual competitive game experience. If the coach is forced by lack of seasoned material to play some lowly substitute, the boy seems to learn the game much more rapidly. Three or four games of varsity experience seem to advance such an individual beyond what he would have been after a whole season of practice and practice scrimmage without varsity game competition. High school coaches prefer boys who have had experience as competitors. In some sports, some college coaches prefer the boy who has had experience on independent teams after graduating from high school. The average college coach wants his freshmen to play a relatively large number of games. Game experience does not seem to be equaled in value by many times as much practice drill and scrimmage.

Insight learning in motor skills refers to a sudden shift in method. The individual may have practiced for a long time in a particular method and may have approached his physiological limit by that method. Adoption of a better method

then results in higher proficiency. Adding the final snap of the wrists in batting or pitching a baseball, substituting finger and wrist control for grosser movements in shooting or passing a basketball, adding body momentum to arm movement in weight throwing in track or in the hard hitting of boxing, all are improved techniques which one may "hit upon" as partial insights. Teacher demonstration, direction, and encouragement should increase the number of partial insights and "short cut" the *trial-and-error* process. One does not seem to gain insight from verbal directions until he performs so that the improved method is executed and its value made meaningful through *personally experiencing* superior performance.

Awareness of exact change is not an essential part of motor learning. One must be very cautious about concluding that a sudden improvement in motor learning is the result of a conscious insight and the subsequent modification of the motor pattern. Frequently, the individual hits upon devices which are successful, adopts them, and performs them in the future without ever having any conscious awareness of just what change took place. Many an individual who can perform a skill well not only cannot tell others how to do it, but actually does not know exactly how he does it himself.

Errors may be unconscious. Just as one may unconsciously fall into improved methods, so may he fall into performance errors. A little variation that lowers efficiency may creep into one's activity without his being conscious of it. His consequent lower performance level is likely to cause him to perform more carefully and attempt to eliminate interfering movements. Some of these errors are difficult to discover.

One teaching technique is to have the learner briefly practice the movements of a major error with focus of attention on that error. This practice serves the purpose of bringing to conscious attention that part of the pattern which must be eliminated. If the error has been, previous to this time, uncon-

sciously performed, the actual *practice of the error* with attention upon it may help to eliminate the error from the total pattern in later performances. An illustration from basketball may clarify this point. In a certain play pattern, one forward had fallen into the habit of running in an arc around the screen set up by his teammate. The path of the forward was a longer distance than the chord across the same arc (the correct path); and the forward could not run so fast around the curved path as he could along a straight line. These two erroneous factors, greater distance and more difficult path to traverse at top speed, spoiled the timing of the whole play pattern. In addition, the incorrect path neutralized the screen by allowing room for the defensive guard to pass between the forward and his teammate posted as a screen. The coach explained the error verbally and then had the forward run through his part of the play several times using the incorrect path. The coach's comment and the focus of attention on the exact error by such practice made the forward realize the movement-part that had caused the play to fail. Sometimes the hardest problem is to find the error which is upsetting the total pattern.

Analysis through movies. Study of moving pictures of oneself may bring to light performance errors not discoverable through ordinary observation and self-analysis. Athletic coaches and players are now making wide use of moving pictures of skill performance. These pictures are particularly valuable to teachers because they make possible a projection of the performer's movements again and again until the analysis is complete. The performer's individual movements can be compared with movements of specialists in the same skill. Variations may suggest possible ways of improvement. Projection in slow motion makes part-movement and fine movement analyses possible. Comparison of the movies of an individual's movement patterns with movies of experts, or

comparison with the movies of accepted performance techniques, may reveal errors not noticed in even the most careful and painstaking practice.

Analysis of one's own activity is very difficult in motor skills. Self-analysis is not always a help in motor learning, and may be a hindrance. Many motor skills are so complex that attempt by the learner at exact self-analysis merely confuses him. The best method of motor learning, assuming that the general orientation toward the goal is already accomplished, is that type of *trial and error* in which the individual is continually revising his procedure in an attempt to improve. *Trial and error* implies that the learner knows what he is trying to do but does not know how to do it. The learner focuses his attention on the results of his movements. The prospective hockey player knows that he must learn great exactness in body control and balance on skates, but he learns it only by practice. The taxicab driver drives through spaces with scarcely room for an extra coat of paint and has no idea what movement variations he took on in acquiring this skill.[2]

The visual sense is of great value in furnishing cues for motor patterns. Experiments and training experience during the War taught us much about visual perception. When it was found practical to train some servicemen so that they could identify planes in two-hundredths of a second or less, new light was thrown on perceptual-motor learning. It becomes apparent without much analysis that if a boy can *learn to perceive* the appropriate stimulus in motor skills in one-twentieth of his original time, he will have much more time for adequate motor response. Such speeding up of perceptual rate was, for a long time, deemed impossible. One was just supposed to be born with a "quick eye." In the service

[2] Compare Perrin, F. A. C., "Conscious Analysis Versus Habit Hierarchies in the Learning Process," *Journal Comparative Psychology*, 1921, Vol. 1, pages 277–308.

program of perceptual-motor learning the men concentrated on the general pattern, not on details.

This wartime training indicated that the way to speed up perception was to give the individual regular practice, with gradually shortened exposure time, on the thing he was supposed to recognize. The application of this technique is apparent to techniques of teaching the student to hit a fast, sharp-breaking baseball curve, to return the fast American-twist service in tennis, to block the short jab in boxing, *ad infinitum.*

Of course, sports are full of fakes and feints which are supposed to cause incorrect perceptions. Moreover, changing background may cause perceptual error. Errors that creep into visual perceptions may be partially offset if the individual has learned to depend on his kinaesthetic sense for cues to movement patterns. Experiments have indicated that drill which develops greater dependence on the kinaesthetic sense increases one's efficiency in golf and basketball. Keeping one's eye on the ball in golf is important because of the consequent body position, and not because of the light-stimulus pattern on the retina. Blind people can and do play good golf.[3]

The relation of eye focus to both static and phasic stance is the key to much of this misunderstanding. Just as the head position tends to be guided by the direction of the eye focus in golf, so it is in tennis. If the beginner is taught to keep his eye on the ball in tennis, he tends to turn his body sideways to the net on his strokes and thereby assumes a more efficient stance. The eyes tend to guide the head, and the head to guide the rest of the body. Experienced divers know how much the body movement in diving depends upon the position of the head. A better teaching technique than that of telling the individual what to do with the eyes and expecting

[3] See "Who Won," *Time*, August 29, 1938, page 32.

the body to follow, would be to explain and demonstrate the correct body stance. Then the student could be given the device of eye focus as a means of guiding this body stance. There are times in competitive ball games when a shift of focus, for a fraction of a second, from the ball to the position of the opponent might make placement more successful.

The visual sense presents illusions which may be partially offset by greater dependence on other senses. Customary "feel" of a motor movement may help correct the tendency to underestimate or overestimate distances; for example, muscular "feel" may partially correct the shorter "seen" distance from the player to the basketball backboard where there are large open areas behind the backboard. "Feel" develops with experience. Coaches soon learn that the longer movements of the larger man look slower than they really are in comparison to shorter movements of the smaller individual. The long-limbed boy looks slower even when he is moving faster than the "speedy" little fellow. Other sport illusions are common. Placing the standards farther apart in the high jump or pole vault makes the cross bar seem lower and easier to "clear." Spinner plays in football, screens away from the ball in basketball, feints and fakes in all sports, are based on the principle that the visual sense is easy to trick. Teams wear uniforms selected to give illusions as to player size—red to give the impression of greater size, and black to give the impression of less size.

It is possible, of course, to create illusions in the kinaesthetic sense. Practice shoes are often heavier than game shoes. The lighter game shoes give one the feeling of being "light on his feet" and agile. The baseball bat seems light and easy to swing after having swung two or three bats together while awaiting one's turn at bat.

The wise policy is to train as many of the senses as possible. Illusions from one sense may then be corrected by cues from another sense; for example, one may hear what he thinks is a

friend's voice but see at first glance that it is merely a stranger with a similar voice. One may hear a player calling for the ball in a basketball game and, in the excitement of the moment, pass the ball to him before checking with the eyes to make sure the voice does not belong to a member of the opposing team.

Speed. Body stance is a cue to learned speed. The slightly flexed knees become postural habits of the athlete. He finds such stance fundamental to fast getaway or change of direction. Students should be taught to avoid, in competitive games, the completely straightened knee joint even during moments of relative relaxation. Preparatory stance also includes weight carried on the balls of the feet, arms bent at the elbows, and "slouched" shoulders. The principle of accelerating speed by adding additional movement to a body already in motion is utilized. The surge forward of the body that starts from the toes has added to it the straightening of the knees; body trunk muscles straighten the torso, thrust forward the appropriate shoulder and upper arm; forearm movement adds to the accumulating speed as the forearm is extended. A wrist snap may be the final contribution to this accumulating speed. The final wrist snap must be included before the momentum from the original push by the toes ceases. Each momentum must be added to the other movement momentums so that the speed will pyramid; that is, so that each movement will add to, rather than follow, the momentum of the others. This technique of accelerating speed appears in the six-inch knock-out punch of the professional boxer, in hitting the ball by the Babe Ruths of baseball, in the marvelous retrieves of a Tilden, in the thrust and parry of a D'Artagnan, or in the golf swing of the expert golfers.

Speed (of an individual) is a collective noun. Individual muscle groups and combinations of muscle groups vary in performance speed to such an extent that different individuals assume different relative ranks depending on the particular

movement pattern that is ranked. Fast starters may be slow runners, and vice versa. One may be "quick" with his hands but not with his feet. Studies of "explosiveness"—time it takes a muscle or muscle group to contract after it starts to contract—reveal wide individuality in this factor. Preliminary experimentation indicates the correlation between reaction time—time elapsing from the occurrence of the stimulus until the initiation of the overt muscle response—and explosiveness is positive but not high.

Certain other factors in speed of response seem to be related to physical education. If the individual makes a choice reaction—selects from two presented stimuli the one to which he responds—the initiation of the response takes longer than does a simple reaction to one stimulus; for example, in certain floor areas if the defensive basketball guard plays the man with the ball too loosely, the offensive player responds to the *one cue* of "freedom from a guard" and shoots. If the defensive player moves just a little closer, he increases the strength of the stimuli for passing to a teammate or decreases the strength of the stimulus to shoot. Two possibilities present themselves. Response is less rapid. Hesitation on the part of the offensive player in such situations is not uncommon.

It has long been established that focus of attention on response produces a faster reaction than focus of attention on perceiving the stimulus for the response. Track coaches know that the dash man should focus his attention on shoving out from the starting holes when he hears the gun. If he focuses his attention on hearing the gun, he will start a little later. Football men will obtain greater speed of "charge" if they learn to focus attention on the initial starting movement and hear or see the starting signal incidentally.

Signals are stimuli to which we supposedly have relatively automatized responses. In continuous team games such as basketball, lacrosse, or soccer, signals are not so common.

Perhaps the best signal system for use in these games is that of having the ball as the *cue*. Offensive floor, or field, formations are quickly assumed upon recovery of the ball. The movement of the ball is the signal for the play. If it is passed to a certain man, that pass is the signal for one play; if to another, a different play. A dribble toward a certain man constitutes a third play, and so on. A sudden exchange of men covered by the defensive team may be an understood signal for a certain maneuver by the offense. Such previously understood cues to appropriate play permit the offensive attack to be made up of all the offensive players, with perfect understanding by each of individual duties and responsibilities. The concerted attack is more rapid because the number of necessary decisions as to appropriate action is decreased.

Teams that have played together for a long while hit upon some signal system, a system which may not be consciously recognized by the players themselves. Players seem to know just what teammates are going to do. Characteristic movements, body positions, or habit patterns are the cues. Teachers are to be criticized because they have not given youngsters methods of speeding up the learning of signal systems (mutually understood cues) in rapid-action team games. Occasionally a boy with more ability than those playing is left on the bench because he does not seem to fit into the combination. If the teacher depends entirely on the trial-and-error learning of competition itself to develop a set of relatively subliminal cues (signals responded to without conscious awareness of the exact stimulus), he is not fair to the newer group members. Neither is he carrying out his real purpose as a teacher—that of speeding up the learning process. He should analyze the cues and resultant patterns that the team uses, then show them to the new boys.

Some of the smaller patterns that make up the panorama of the game will become automatized in a specific *time-movement* pattern. Change in timing of any part, or change in any

movement-part, will upset the habit continuum. A boy who learns to take his time on long shots in basketball will be ineffective against a defense which hurries him. A football punter is sometimes less effective if his kicking is hurried. Golf players have their habitual speeds and may be upset by being hurried. Many of the relatively automatized movement patterns of daily life have a specific performance speed. This speed is rarely the individual's maximum potential speed for that specific series of movements. It is merely the speed that the exigencies of circumstances induced in him at the time he was automatizing the pattern. Patterns of sports, established after long practice sessions, may fail to function in games because the established timing of the patterns is too slow for the game, and change in timing upsets the automaticity of the performance.

The effect of sudden change in *movement-parts* of a team-pattern is equally great. Collegiate football defenses stress this method of upsetting offensive patterns. Teams trained to play against a five, six, or seven man line are at a loss when first opposed by the "sliding line." Coaches are now faced with the problem of automatizing certain major plays for use against many types of defensive line play.

The speed of contraction of the muscles themselves after they start to contract ("explosiveness") is an important quality for the teacher to consider. Those individuals possessing ability for exceptionally fast muscular contraction tend to excel in many games. A great baseball catcher whips the ball on a straight line to an exact spot inside second base with a bent arm snap that starts with the ball just back of his ear. He does not even rise from his crouched position. A great basketball player passes to a teammate or tosses a goal from considerable distance with only a short arm and wrist movement. Wrist flips of a ball by such individuals seem to possess as much efficiency as long arm and body movements of another individual. The explanation of this ability lies in

the exceptional speed imparted to the ball by these faster contracting muscles. The form taught to such an individual should vary widely from that taught the individual with a low rank in "explosiveness."

Lever length is another important factor in most suitable skill form. The boy out on the end of the line in the game of "crack the whip" moves faster than those nearer the middle. The rim of a turning wheel moves faster than parts nearer the hub. The boy with the long arm and the boy with the short arm may make the same overhand throwing motion, with the head of the humerus revolving at the same rate in each case. The ball released at the finger tips of the longer arm will have greater speed than the ball released at the finger tips of the shorter arm. Teachers should keep this speed factor in mind when teaching form in running, throwing, and other sport activities. The reason for the popularity among tall basketball men of the one-handed shot, which starts about the level of the ear and consists chiefly of a forearm, wrist, and finger movement, is evident. Large hands, long arms, and additional height make this form suitable for them. The large hands make control of the ball with only one hand relatively easy. Moreover, the distance that the ball must travel upward, from point of release, is less in tall men. They seem to throw this "shot" with little effort. It is characteristic of human learning to adopt that method which requires the least expenditure of energy in achieving the desired goal.

Habit levels of performance. Learning is faster, and retention of things learned is greater, if the learning experience results in satisfaction. If the results are annoying, they tend to be replaced by other more satisfying behavior. The desirability in competitive athletics of a reasonable amount of winning becomes apparent if one considers the facilitating effect of such satisfactions of learning. Likewise, for motivation purposes, a few losses in competitive athletics are desirable. They are of value as a means of: (1) eliminating

the tendency to be satisfied with present level of achievement, (2) arousing greater effort toward higher levels, and (3) focusing more attention on correction of present weaknesses. When the teacher is using competition for motivating purposes, he must equate his competitors. Succeeding too easily is just as harmful to the individual as failing too frequently. If mediocrity of attainment (as compared to one's potentialities of attainment) is followed by satisfaction, mediocrity becomes the habit performance. However, if the competition makes one's mediocre performance appear inferior, he is dissatisfied and tries harder to improve. One's mistakes are more apparent in "stiff" competition. It is extremely difficult to analyze weakness in performance of a competitive skill if the opposition is inferior. The mediocre performance tends to look superior.

SAMPLE TEST ITEMS

Yes-No

1. Is progress in motor learning greatly facilitated by exact repetition?
2. Does motor learning seem to be learning to make specific and exact responses to specific and exact stimuli?
3. Do variety and diversity of response characterize the early stages of motor skill learning?
4. Should a general orientation toward the skill patterns to be acquired precede specific drills?
5. Do most of our improvements in motor performance follow insights; *i.e.*, result from insight learning?
6. Can one learn and adopt improved techniques in motor skill performance without being aware of exactly what change in behavior took place?
7. Might it be advantageous to one's learning to repeat one's erroneous performance?
8. Has it been definitely proved that looking at moving pictures of one's skill performance is a device which greatly accelerates learning of the particular skill?
9. Is self-analysis always a help in motor learning?

10. In motor skill practice, should the individual practicing focus on the results of his movements?

11. Is there a probability that teachers have placed too great emphasis on verbal and visual cues in motor learning?

12. Is the statement that "seeing is believing" particularly applicable to visual perception in sports?

13. Should one swing two or three bats before stepping into the batter's box to face a "slow-ball" pitcher?

14. Is phasic posture an element in performance speed?

15. Can an individual be taught to increase very greatly his speed in certain motor performances?

16. Are "signals" a disadvantage in fast-action games such as basketball, soccer, or lacrosse?

17. In the teaching of team games, is it advisable for the teacher to teach similar forms for individual ball handling, shooting, kicking, or what not, to his various students?

18. Is learning faster when the student assumes the nature of a docile receptacle which is willing to absorb passively whatever the teacher presents?

19. Is the chief emphasis of the advocates of whole learning techniques "functional meaningfulness"?

20. Is a whole exactly equal to the sum of its parts?

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14.

Vital Factors in Pupil Learning

The background of attitudes. Two frequently listed objectives of physical education—organic vigor and neuromuscular skill—seem to be fostered by well-chosen bodily activity. Social conduct and attitudes, health habits, and the like, imply a background of knowledge, certain ideals or goals, and the conditioning of cooperative group activity. The reader is already familiar with the nature of ideational learning and the procedures involved. New experiences are always interpreted in terms of past experience. Only by such interpretation can they have any meaning. The city boy who, on the occasion of his first visit to the country, asked, "Is there much country around here?" was interpreting his new experience in terms of cities and city parks.

Knowledge must be meaningful to be useful, and meaning grows with experience. The terms "physical fitness" and "the joy of vigorous competition" are meaningful to the physical educator. Meaning is in a sense quantitative in that it grows with the amount of experience. The individual who does not believe in the joy of wholesome physical activity because he has never experienced it is as ridiculous as the Irishman who said there was no such animal the first time he saw a giraffe.

For knowledge to be functional, it must have a feeling tone attached, a tendency to act in accordance with that knowledge

when relevant situations occur. Years of training in habits of cleanliness and acquaintance with clean sanitary surroundings have developed a cleanliness attitude in us. Whether the teacher plans to do so or not, he teaches attitudes. Planning for these concomitant learnings is desirable, for only by planning can the teacher protect the pupils against wrong attitudes. A pupil might be learning many health facts from a teacher who is simultaneously teaching wrong attitudes toward health. Unpleasant teacher personality, bad personal health habits practiced by the health teacher, and unclean, poorly lighted classrooms and laboratories could be possible contributing causes. The mental health of the teacher is at least as important as the physical. His attitudes will be reflected in pupil behavior.

THE MOST INTERESTING WAYS TO LEARN

Learning is more interesting under a teacher who radiates his enthusiasm for what he quite evidently believes to be very worth-while activity. The better teacher has youthfulness of spirit, vigor, vitality, and deep personal interest in *the pupil.* This teacher is a participant in learning experiences, not a taskmaster and a "boss." He may teach the formal and technical aspects of games and activities; but he remains an engineer of growth and development, not a mere mechanic of skills. He puts attitudes and understanding above technical skill or erudition. He fits his methods to the pupils' needs. He is ever trying to be an example to follow, an ideal to his students.

The successful teacher clarifies the goals, demonstrates the techniques, furnishes verbal and visual aids and "keys to recall." He helps the student recognize learning progress and success. He utilizes charts, diagrams, rating scales, tests, and performance examinations; but he uses them in cooperation with the students as a means of determining progress, parts needing greater emphasis, errors to be corrected, and

degree of approach to the mutually shared goals. He varies the methods and activities, and continually expends his energies in fostering an environment that is more conducive to learning. Such developments as energy, strength, endurance, organic vigor, safety, recreational and body-control skills, socialized conduct, and healthy attitudes are to him a means to an end. These developments are a constructive, preventive, and therapeutic means of culturing *personality.*

THE MOST ECONOMICAL WAYS TO LEARN

Any discussion of economical ways to learn must assume interest to exist. Bills says: [1] "There is reason to suppose that mere passive receptivity would never result in the acquisition of anything." The interest in the learning is related to the speed and efficiency of learning. If the student is eager to learn, he will tend to progress toward the desired learning goal more rapidly. Indifferent attitudes must be eliminated before any marked progress can take place. Moreover, learning experiments indicate that determination to learn has a real effect on the permanence of learning. This determination manifests itself much more in delayed recall than in immediate recall. This finding offers some encouragement to the individual who wants very much to succeed but progresses slowly.

Learning is progressive. Present learning depends upon what has preceded it. It is likewise evident that environment must affect the rate and amount of learning. The teacher fosters an environment that will focus the pupils' energies in the direction of the desired development. The question arises as to how these energies can be directed so that a maximum amount of learning will result from the pupil time expended. Let us examine certain theories as to economy in learning:

Energy. The general health of the student is closely re-

[1] A. G. Bills, *General Experimental Psychology,* page 250. New York: Longmans, Green and Co., 1934.

lated to the amount of energy he will have available to expend in learning experiences. The value of correct health habits and sane training regimens become apparent. Learning is an active process, and activity takes energy.

Warming up and cooling off. In learning that involves vigorous physical activity, the individual should begin with moderate physical activity, gradually adjust his physiological functioning to the intense effort of the peak of practice, and slacken the pace toward the end of the practice session.

Variability in effective techniques. The most effective methods of learning will differ with the pupil. As was mentioned earlier, one's "quickness to learn" seems to be an individual matter. In motor skills the more apt individuals can rely to a greater degree on verbal cues and guides. They can profit more from visual presentation of the desired pattern. They tend to rely more on verbal guides and visual imagery than does the slow learner. The slow learner relies to a great extent on kinaesthetic cues. Previous background of an individual and his aptness are what determine the meaningfulness of new material. The more meaningful it is, the faster he learns. The more intelligent individuals make a more effective transfer of previous learnings to present situations than do the less intelligent. Pupils vary in the amount of profit from verbal explanation and description, and from motor demonstration.

In teaching motor skills, concrete verbal directions are, in general, superior to mechanical guidance. Visual guidance from demonstration should include only small units of a complex pattern at any one demonstration. These demonstrations are usually more valuable to the pupil when carried on in slow motion. The beneficial effects of verbal directions decrease rapidly as the amount of such direction, per unit of practice, increases. Mechanical guidance is the least valuable of these three types and should be given only after some preliminary orientation, and then in small amounts; that is

to say, if the teacher uses the method of taking hold of the hand or arm of the student and thereby guiding him exactly through the desired movement, he should use this mechanical guidance only after the student has a definite (though perhaps somewhat general) idea of what movement he is trying to learn. More than two or three repetitions of this exact manual guidance is probably an unwise expenditure of practice time.

For a few individuals, meaning in motor learning seems to depend almost entirely on kinaesthetic sense experience. Meaning to them is expressed in vague feelings, and in results of activity. They must learn motor skill games by playing them, in contrast to the more common method of organizing playing experiences by the use of verbal guides and some visual imagery. The final level of attainment of the slow-learning individual who relies to a great extent on trial and error and kinaesthetic "feel," may be very high. Some learners object to trying new ways of performing skills because the "feel" is not right. The old—and perhaps incorrect—way of course has the right (or familiar) "feel." Physique, speed, vitality, motor aptness, and great interest may contribute to producing a professional star out of a boy whose verbal guide and visual image accompaniment to motor learning is practically nil. An average rank as to Thorndike's "C.A.V.D. intelligence" is not even a prerequisite.

Early correction of major error. The teacher should be alert to prevent repetition of major performance errors. Failure to correct major errors early retards learning, because replacement by correct forms is much more difficult after longer erroneous performance. This statement does not apply to minor errors—only to errors in gross framework.

Specific directions or none. The teacher should be cautioned against trying to correct unsuccessful performance before he, himself, has determined correctly by careful analysis the specific error in the total pattern. Directions for cor-

rection of error must be exact. Exhorting the student to try to improve and abusing him for inefficient performance, without specific and constructive criticism, is uneconomical in fostering learning. The learner may proceed to carry out the incorrect method with greater effort.

Brief spaced practices. Practices should be brief with appropriate intervals between practices. In motor skill learning, a frequency of two practices daily in the earlier stages, and one later, seems to be the most efficient. After learning has progressed through the novice stage, longer intervals may be more efficient.

There is little experimental data available on the problems of most economical length of practice and of interval between practices. Lashley found five trials a day to be superior to twenty, forty, or sixty, in practicing archery. Culler found longer practice periods superior (in a stylus maze experiment) if a whole day intervened between practices. Hardy, working with human beings on a stylus maze, found a four-day interval best, with twelve hours or two days next in value. (Twelve hours and two days were equally effective intervals.) He discovered that a whole day is least efficient of these four interval lengths, in effect on learning.[2]

Learning during rest. The intervals between practices seem to aid in the elimination of errors. Chance errors which crop up in practices tend to be less firmly established than the more appropriate responses and hence forgotten sooner. Adaptable performance, recalled and reapplied after an interval of no practice, seems to gain greater permanence than the same adaptable performance successively reapplied in continuous practice. Cramming is not an efficient method of learning.

Effects of fatigue on learning. Experimental data indicate that fatigue and decrease of interest make short practice

[2] See summary in Bills, A. G., *General Experimental Psychology*, page 218. New York: Longmans, Green and Company, 1934.

periods more economical in total learning time. The onset of fatigue can be noted in the slower rate of muscular contraction. In general, when performance reveals this slower rate, further practice is thought to be uneconomical in learning time expended. When the practice periods are too long, the student loses that exuberance of energy and vitality usually conceded to be essential to progressive learning.

The question has been raised by a few teachers as to whether the somewhat fatigued pupil may be in a condition for faster learning. The hypotheses are that: (1) cleverness and finesse are more likely to be practiced in an attempt to save energy, and (2) the pupil will try harder for successful effort in order to save himself from further laborious effort. Another possible hypothesis is that there may be some toxic, and therefore stimulating, effect from *excess* fatigue. If there is any acceleration of learning from the toxic stimulus of extreme fatigue, its utilization would be difficult to justify on the health basis; and the harmful effects might far outweigh the specific learnings.

Need for intense practice. It is desirable that the motor skill learner practice occasionally with an intensity that approaches his maximum. By so doing, he trains the body to adjust physiologically to moments of extreme effort. He learns a higher level of maximum accomplishment. He trains the body to be more resistant to fatigue.[3]

Staleness. The stale individual should cease the activity until he can attack it again with avidity. Staleness is a term applied to periods in which the individual not only seems to be very slow at learning but also seems to have lost much of the ability already gained. If the learning material is mental, the cause is usually ill health, or intolerability of the task because of competing urges, or temporary satiety of the

[3] Schneider, E. C., "A Respiratory Study of the Influence of a Moderate Amount of Physical Training," *The Research Quarterly of the American Physical Education Association*, March 1930, pages 1–8.

urges to learn that particular activity. If the staleness is physical, it may be due to overwork. Observation of the weight chart or of fluctuation in appetite may give a clue. Irritability, depression, and greater frequency of errors are other signs. In athletics, the individual may brood and worry over performance to such an extent that he is exhausted before he tries to perform. Tremendous social pressure on the individual is often the major cause of such temporary brooding.

Plateaus. The teacher should recognize and adjust teaching methods to learning plateaus when they occur. Periods of no apparent progress will appear in learning. Loss of interest, discouragement, fatigue, and unconscious adoption of error may be contributing factors. Overconfidence and satisfaction with present level of accomplishment impede progress and result in plateaus.

Freedom for individuality. A reasonable amount of freedom for individuality of development seems to be more effective in heights attained and more economical in terms of progress per unit of time. The individual learner may have approached the physiological limit of improvement by the methods he is using. Further improvement may be possible by the adoption of new methods. He may hit upon these better methods by trial and continual revision with an accompaniment of intense zeal; and by experiment with methods that have proved efficient for other individuals. The teacher of experience can make suggestions for such experimenting. As a general rule, the teacher should try to avoid arbitrarily requiring long experiment with a method if the student prefers some other method at which he is reasonably successful. The teacher cannot be certain that a specific method fits exactly the needs of the individual; nor that further experiment may not prove some other method superior. Experts in most of the fields of sports have their eccentricities of performance, eccentricities which seem to be particularly effective for those individuals; for example, the use of two hands on

the tennis racket by two Wimbledon stars from Australia; the running style of Nurmi; or the basketball shooting form of Luisetti. Some eccentricities, however, are mannerisms superimposed on fundamental movements.

Part-drill must be meaningful. Learning is more meaningful, and therefore more economical, if it can be intimately linked with its application. This statement is not meant to oppose specific drills or part-method teaching, but to emphasize the fact that the student learns more rapidly an activity for which he sees the need. Organization of the parts into the whole pattern must be a conscious goal of the student even while he is focusing on parts. When the size of the unit is not too great, it may be advisable to practice the whole while keeping in mind the *specific objective*—that part which needs particular attention. The student is thereby etching in the details of the configuration. The part emphasized receives continual correction from the stress of the whole dynamic pattern. A few examples of application of this principle in sports follow:

1. A football team with forward pass defense as the specific objective of a unit of practice should be confronted occasionally by an offensive running play, so that the practice will more nearly approximate the game situation.
2. A basketball team with ball handling as the specific objective of a unit of practice should practice "freezing" the ball by the use of team *offensive maneuvers* and should occasionally attempt to take advantage of flagrant defensive error by changing tactics and scoring.
3. A tennis player with court position as the specific objective should play against an opponent who emphasizes "coaxing" one out of position in order to make a placement. If the teacher has sufficient mastery of the game, he may do some of his best teaching by playing against his students occasionally in order to give them practice in correcting their particular weaknesses.

Avoid over-tension in early stages. Learning environment should be as free from pressure as possible, particularly dur-

ing the beginning stages. New responses not yet thoroughly automatized may be released by a variety of stimuli. The response is not yet limited to the appropriate stimulus pattern. Over-tensity may inhibit action or cause action to spill over into extremely erroneous performance. Long training will limit the response to stimulus-cues that fit the immediate purpose. The emotional accompaniment of early performance in a social situation may become too intense if the distractions are too great. Inappropriate emotional responses are common. Stage fright, general tension, and resulting awkward and fumbling movements are such nonapplicable responses. The individual should be inured gradually to such stimuli. This process of *negative adaptation* is a learning process and is subject to the same principles of learning as positive learning. The earlier lessons must not be too complex and difficult. If they are too difficult, failure may bring on discouragement, and greatly retard learning. The beginner who "blows up under fire" suffers an emotional shock which may result in even greater sensitivity to these emotional stimuli to inappropriate responses.

Cramming and negative transfer. The number and complexity of the activities should be adjusted to the level of the learners. Presentation of too many activities in a period of time, or too many techniques of activity performance, retards learning. Sports coaches frequently, under the pressure to win, give teams too many plays and too many techniques for performance of play patterns. The attempt to learn too many things at one time may prevent the mastery of any. A team which might appear experienced and successful with fewer and simpler patterns takes on the appearance of a "green" team.

One of the major reasons for this learning difficulty, in addition to its complexity, is the amount of negative transfer. The play patterns may be identical in certain cues but opposed in others. The players get "mixed up." Mutually

interfering habits should be learned separately; that is, one should be completely learned before the other is practiced. When the learning practice changes from one activity to another, identical in some parts but entirely different in other parts, and the stimuli remain relatively the same, there will be transfer of the unsuitable responses as well as the suitable. The responses that fit one situation will be partially linked together by practice. The new learning must break down this linkage before the desired parts of one pattern can be torn away and woven into the other pattern. Too many cues in one pattern are tied up with inappropriate responses in the other pattern. Take the example of the football guard learning his assignment on an off-tackle play. The signal may be the same for one formation as for another. The defensive alignment may be the same. His steps out toward the flank may be the same. But his blocking assignment may differ as the formation in his own backfield changes. He gets the two assignments confused. Imagine his problem under a coach who teaches, in parallel order, three or four ways of running the basic plays. Sequential order with completed learning per unit would be more economical of learning time.

WAYS RESULTING IN MOST TRANSFER TO LIFE

There are three common theories of transfer. Thorndike's theory states that there is no transfer except in case of identical elements. Let us apply this theory to games. If there are movements of the feet and arms in tennis that are the same as those in handball, the tennis player may adapt those tennis movements to handball when he takes up that game. Such identical movements are even easier to note between tennis and badminton or ping-pong. Certain identical movements seem to be present in high jumping, pole vaulting, and basketball.

C. H. Judd's theory that transfer results from generaliza-

tions is somewhat the theory presented in Chapter 8 under the heading, "Motor Learning Is Generalized." Judd applies his theory to learning that is predominately intellectual, but it seems to the authors that the same theory applies to motor learning. According to this theory, the child learns certain basic habits and skills of body control, static and phasic posture, and "natural activities." Once having learned to jump over crossbars or into a broadjump pit, over hurdles or prostrate teammates and opponents, the individual can apply the jumping skill in general. He can jump over puddles or brooks, and away from fast-moving vehicles. Various sports such as football, tumbling, and wrestling teach him certain body controls in falling. He can fall with less likelihood of injury, even in situations not related to sports. His generalized motor habits function constantly in unconscious adaptations to his movement needs.

A third theory, advocated by the Gestalt group, states that transfer results from cues releasing previously formed patterns. The rocking chair is a part of a stimulus pattern (cue) to a different postural response from that of the straight chair. The visual cue of a large object approaching one with "threatening" speed sets off the rest of the previously acquired pattern of which that cue was a part—namely, sudden movement of avoidance. The car driver completes the pattern, of which an approaching car is a part (the cue), by a motor movement which guides his car more to the right. Wherein the cue makes up a part of several previously formed patterns, to none of which it is more firmly attached, there is hesitancy until additional cues favor a certain pattern. The *set* of present situation and activity guides the cue response into patterns with which that cue has previously been associated. According to this theory, the tennis player on the badminton court completes the pattern of which the racket in his hand, the approaching small object (the shuttlecock, in this instance), and the game *set* are a part. He uses a tennis stroke to hit the shuttlecock.

Thorndike's theory emphasizes the value of having as many parts as possible of the present educational experience identical with what one is likely to experience in life. Judd's theory emphasizes the need for applying our present experiences in a variety of situations so that the habits will be more likely to be generalized. The cue theory differs very little from Judd's theory except that it is an attempt to explain transfer, when transfer occurs, in terms of resemblance of pattern parts.

SUGGESTED WAYS OF INCREASING TRANSFER

1. When feasible, set up rules of procedure of general applicability.

Examples:

a. Habit of warming up before vigorous bodily exercise.

b. Habit of keeping knees slightly bent for rapid start or change of direction.

c. Knowledge of principle and methods of producing "English" on the ball in ball games.

d. Acquaintance with methods best suited for arrangement and organization of material as an aid to retention.

e. Familiarity with the principle of adding movement to movement in order to pyramid speed; for example, arm thrust and wrist snap to moving body.

f. Awareness that irritability and tension are cues for needed recreational "antidotes."

2. Utilize patterns of response in a variety of situations.

Examples:

a. Practice desirable posture habits in sitting and standing, while moving and at rest, at home and at school.

b. Practice use of natural activities and movement rhythms in a variety of sports and recreations.

3. Emphasize form and method.

Examples:

a. Learn graceful and efficient form in running or other natural activities.

b. Learn *methods* of caring for one's health as opposed to mere factual knowledge.

4. Keep the school activities in as close conformity as possible to actual life needs.

Examples:

a. Arrange for safety patrols, first aid, and life-saving training.

b. Learn recreational skills such as swimming, dancing, bowling, tennis, fishing.

5. Focus on general habits, ideals, and traits of character.

Examples:

a. Learn work habits and time budgeting.

b. Practice honesty and cooperativeness.

c. Develop leadership qualities, independence and self-reliance.

WAYS MOST APPLICABLE TO WHOLE PERSONALITY DEVELOPMENT

Personality is the pattern of the individual's total behavior. It is one's entire make-up expressed in the dynamics of behavior. Education is concerned with developing personality expression according to certain ideals of social contribution and cooperativeness, and with developing individual self-reliance and independence.

The emphasis in teaching for whole personality development must lie in the direction of functional behavior as contrasted with mere erudition. Teaching must be designed: (1) to decrease internal conflict of desires; (2) to develop in the individual definite goals and ambitions approved by society; and (3) to train the individual in an integration of habits, attitudes, and methods of thinking that, expressed in behavior, bring benefit to mankind and happiness to the individual.

The objectives of personality education should include the acquiring of good habits and wholesome attitudes, the attainment of foresight, self-control, and an accelerated social maturity. The degree of attainment of such objectives will vary from individual to individual because of differing congenital equipment, and because of reaction tendencies persisting from infancy and early childhood. The home is partly beyond the control of the teacher; and yet it has a profound influence on personality growth. Social conduct, social attitudes, and so-

cial standards of the particular decade, as revealed in adult attitudes and behavior, and in magazines, movies, and newspapers, affect the students. Without some cooperation from the home, the educational influence of the school and teachers may be unable to compete with such phases of society as night clubs and roadhouses.

The existence of such competing "educational" agencies does not excuse the teacher from the responsibility for directing desirable personality development. Competition from opposing agencies makes his job even more important.

PHASES OF PERSONALITY NEEDING EMPHASIS

An almost universal weakness in personality is the tendency to feel inferior. In order to assuage inferiority feelings, the individual must be helped to a reasonable amount of successful accomplishment and social approval. The student must be guided into activity in which his abilities make possible successful accomplishment. The competition must be commensurate with his abilities. He must learn self-confidence.

Acceptance in social groups and success in social situations is, to a large degree, dependent on the skills of the individual. To swim, to play tennis or golf, to dance, to bowl, or even to participate in the team games implies adequate skill to be an asset to the group. One psychologist found that participation in games and sports was usually accompanied by personality development. To get along well with the other sex implies practice in co-recreational activities. Skill in music, skill in sedentary games, in dramatics, or in leading a discussion may secure social acceptance for the adult. Youth prizes the more active type of social, recreational, and co-recreational skills. With the modern emphasis on pleasurable physical activity for tension releases, these active types of social recreation are increasingly becoming a part of the adult social milieu.

Intelligence means, unless given artificial erudition em-

phasis, ability to deal with the perplexities and problems of one's daily life. These problems may be social, physiological, emotional, academic, or economic. In the first three aspects, the teacher of physical education can be of great help. He can foster co-recreational activities, healthy and vigorous physiological development, and stabilizing emotional experiences. He can help the child attain the socio-motor skills. In other words, the teacher can improve the child in confidence, skill, and emotional balance and hence, increase his ability to meet daily problems.

Energy is a highly desirable attribute of personality. An energetic personality is always colorful. Mental and physical health habits foster the generation of this dynamic element. The industry and perseverance necessary to succeed and the will to achieve are manifestations of this energy properly directed. The sparkle of wit is a phase. The buoyancy of spirits that is supposed to characterize youth is a joyous expression of excess energy. The elusive aura of personal magnetism possessed by striking personalities in this energy suffusing their social behavior. There is evidence to show that energy is related closely to personality development.

Emotional stability is one of the objectives of personality development. Emotional stability means the ability to act intelligently under duress, to work in spite of discomforts, to maintain outward calm and intelligent action in the midst of crises. Pupils will differ widely in their sensitivity to emotional stimuli. All must strive for intelligent control of emotions. Those of the more sensitive nature are not necessarily the most unstable. They may even acquire adequate behavior more quickly. Ability to feel deeply is very desirable. Life would be colorless without emotion. It is the overt expression of emotion that needs to be dominated by intelligence and reason.

Techniques and activities should be so arranged as to foster sociality in the student. Ability to get along with others

agreeably and harmoniously must be developed. Wide experience in associating with others is the major way to acquire this ability. One must learn: (1) to see the other fellow's point of view and (2) to see one's own behavior objectively. Optimism, cooperativeness, a sense of humor, freedom from intolerance, and a sincere interest in others are elements of sociality.

In drawing up the program for the school year, one should list the phases of personality that are to be stressed. Health habits, knowledge and attitudes, available energy, organic vigor, skills for body control, safety, and recreation, and social conduct and attitudes are general objectives and, of course, should be included. But specifically desired personality traits and specific situations in which each trait is to obtain developmental experience must be listed; for example, one might list honesty as a trait and, as specific developmental experiences of honesty, list care of equipment, behavior during examinations, giving credit to the other fellow when he deserves it in the give-and-take freedom of play activities, care of public property, abstinence from dishonest collection of towels, silverware, or confections on trips, honesty in score-keeping in games, exact accounting for team, class, or club monies when handled, and the like.

In order to make such training effective, the teacher and students should discuss the specific objective and approve and adopt it as a part of the development aimed at in their daily and weekly program. An instance of the use of this procedure is frequently observed in the teaching of sportsmanship. The customary way is for the teacher to hold a group discussion of the attitudes toward opponents, officials, and guests during the week preceding some form of interschool contest. The group discusses the situation as it exists, desirable changes, and methods of instituting them. The group then draws up plans for activity toward achieving these changes. Some guidance and encouragement are given dur-

ing a preliminary tryout of the plans in an intramural activity period. Needed revisions of plans may become apparent. The revised plans for activities toward the achievement of this phase of sportsmanship are then tried out at the interschool contest. After the experience of the real contest, summary notes are recorded by student committees. On the following day, the class discussion is led by the student committee chairman. The results are discussed, suggestions are drawn up for future progress, and needed committees are elected. The motivation for this type of lesson needs to be as great as possible, but it must be indirect. The teacher must do his teaching by suggestion and example. The project must be voluntarily and enthusiastically undertaken by the students if the lesson is to be effective.

If the class can be motivated to undertake the development of a certain personality trait, they will then seek suggestions from the teacher. The teacher, with his greater breadth of experience, can suggest and arrange for varieties of pertinent activities. A personality trait needs to be expressed several times in a variety of situations before it begins to take on the nature of generalized habit. The situations must be real and lifelike, not artificial and funereal.

Personality factors such as abundance of energy, emotional stability, sociality, self-confidence, optimism, tolerance, and sense of humor should be definite student-approved objectives; should be given due weight in selection of appropriate activities; should be reworded by the student in terms of the desired outcome for the specific activity; and, following the activity, should be evaluated by the student as to outcome. Evidence of lack of such personality factors is easily detected. Even the students can recognize lassitude and indolence, fits of anger, stage fright, seclusiveness, bullying, cliques and snobbishness, race and religious antagonisms, and inability to see a joke on oneself. It is the teacher's responsibility to guide the student into conscious practice of behavior which

will replace lassitude with both energy for and urge to activity, practice of behavior which will substitute emotional control for fits of anger, and activity which will modify social maladjustment through social experiences productive of tolerance, kindliness, sociality, self-confidence, and objective self-insight.

The value of teacher example for personality development cannot be stressed too highly. The child learns by his association with others, by reading, by observation of adults, but chiefly by active practice and self-direction in an attempt to emulate those he admires. The teacher may be his model.

As the discussion in this chapter has progressed, it must have become apparent to the reader that emphases in learning were being discussed, not completely separate learnings. A view of learning from four angles was presented; namely, student interest, economy of student's effort, transfer to life, and personality development. The first emphasized the feeling tone; the second, time and energy; the third, effectiveness for use; and the last, the unified whole—the changed person.

SAMPLE TEST ITEMS

Yes-No

1. Are wrong attitudes taught?
2. Can the teacher force the children to be intrinsically interested in the physical education activities?
3. Should mechanical guidance be given major emphasis as a technique of teaching motor skills?
4. Must the individual possess a high I.Q. in order to become a great performer in motor skills?
5. Are general directions to try harder, to fight harder, to expend all one's energy, and the like, of great value in teaching specific motor patterns?
6. Is it possible that one improves somewhat in an activity during the intervals between practices of that activity?
7. Can one actually expend energy in worry to such a degree that he is fatigued before performance of the activity about which he was worrying?
8. Is a plateau necessarily a period of no learning?

9. Might specific attention to improvement of *parts* of motor pattern activities be more productive of improvement while the *whole* activity is being practiced?

10. May certain transfers of training from one activity to another result in greater learning difficulties?

11. Might it be psychologically sound to give more praise to the inferior students than to the superior?

12. Is organic vigor an important factor in colorful personality?

13. Is one's emotional stability directly dependent on his susceptibility to emotional stimuli?

14. May general traits of character be developed through a variety of specific experiences; for example, can honesty in examinations, in keeping score, in caring for property, and the like, become generalized so that it applies as a guiding principle to one's various life activities?

15. Do the techniques utilized by the teacher vary the amount of generalized learnings eventuating from specific learnings?

16. Does the possession of generalized verbal symbols (such as honesty), made meaningful by a variety of specific experiences, aid in transfer to new situations?

17. Does the teacher radiate attitudes?

18. Are teaching and learning two aspects of a cooperative enterprise?

19. Other things being equal, is the teacher justified in planning activity so that the pupil may acquire the desired learning: (1) in the shortest time, and (2) in the easiest way possible?

20. Other things being equal, does the pupil with a superabundance of energy learn faster than the pupil who possesses an average amount of energy?

PART V REVIEW TEST ITEMS

True-False

1. Learning involves change in structure.

2. Learning is both a process and a result.

3. Motor learning as a process seems to be greatly facilitated by repetition.

4. Motor habits tend to remain exact and specific.

5. Motor pattern forming consists in establishing specific chain responses to exact stimulus patterns.

6. Learning a new skill in physical education is chiefly a problem of learning new movements.

7. In learning a motor skill, the student knows exactly what move-

ments he should make, but he has the problem of learning how to make those specific movements.

8. In motor skills, one practices wrong responses in order to learn correct responses.

9. In describing the stage of development of the average high school student when practicing his favorite sport, it would be correct to say "he is learning," but not correct to say "he has learning."

10. If the learner has plenty of strength, he does not need to learn how much strength to use in specific movements of a skill.

11. In motor learning, one continually revises his methods of performance.

12. Timing is inborn and cannot be learned.

13. To learn the sequential order of the various part-movements that make up a skill is a harder task for the high school student of skills than his secondary school problem of learning to make the movements.

14. The experienced baseball coach can tell the novice pitcher exactly what form he should use to throw a baseball.

15. Variety and diversity of response characterize the beginner.

16. Emotional intensity and muscular tension are likely to accompany the early stages of motor pattern learning.

17. Emotional intensity may facilitate learning of motor skills.

18. Emotional intensity may be deleterious to learning.

19. Getting oriented toward the goal is the proper initial step of the motor skill learning process.

20. Insight learning in motor skills refers to a sudden shift in method.

21. Awareness of exact change is an essential part of motor learning.

22. Superior performance of motor skills is usually characterized by accurate self-analytical knowledge.

23. It may be advisable to have the student repeat, in slow motion, erroneous movements that he has been making.

24. Moving pictures have little value as a means of motor skill analysis.

25. The visual sense is the only important sense in motor pattern learning.

26. The tennis player should always "keep his eye on the ball."

27. The visual sense is very difficult to "trick."

28. Speed of all movement patterns is a unitary trait in each individual.

29. Individuals assume different relative ranks in performance

speed, depending on the particular movement pattern that is ranked.

30. Reaction time and "explosiveness" are synonymous terms.

31. Focus of attention on response produces slower reaction than focus of attention on perceiving the stimulus.

32. Choice reactions are faster than simple reactions.

33. The teacher should depend on the trial-and-error learning of competition to develop cues for appropriate plays in basketball.

34. Timing is an automatized part of habit patterns of movements, and, when the situation requires a different timing, the habit performance is upset.

35. The most suitable form for an individual to use in performance of a skill is that used by the greatest expert in that skill.

36. Punishment for errors tends to retard learning.

37. The combination of reward and punishment is less effective than reward alone as an incentive to learning.

38. As a general rule the teacher should equate the competitors when using competition for motivating purposes.

39. Determination to learn has no effect on permanence of learning.

40. The student's immediate objective should be set considerably higher than he can achieve.

41. Passive receptivity on the part of the student is an excellent learning attitude.

42. Not more than one incentive should be brought to bear on any one learning problem.

43. In general, greater easiness of the task tends to produce greater interest.

44. At the present stage of experiment, the whole-part method seems to show some superiority to either the whole or the part method.

45. In general, whole learning achieves an integration which part learning can achieve only by extra effort in connecting the parts together.

46. In general, part learning seems to offer easier units to adjust to the capacity of the learner.

47. Does meaning tend to grow with amount of experience?

48. Does the teacher always teach attitudes?

49. Are attitudes and understanding more important than technical skill and erudition?

50. Is present learning independent of what preceded it?

51. Does environment affect the rate and amount of learning?

52. Is manual guidance (taking hold of and guiding the student's hand and arm, for example) superior to verbal guidance?

53. Is the motor skill learner who depends chiefly on the kinaesthetic sense experience greatly limited as to the final level he may attain?

54. In general, are special drills on weaknesses uneconomical of learning time?

55. Is the onset of fatigue characterized by a slower rate of muscular contraction?

56. Is it advantageous in learning to exert oneself occasionally with an intensity that approaches one's maximum?

57. In motor skill learning, does forgetting make intervals of longer than twelve hours uneconomical for the learning process?

58. Does adaptable performance, successively reapplied in continuous practice, gain greater permanence than the same adaptable performance recalled and reapplied after an interval of no practice (same total number of applications in each case)?

59. Is overwork a more likely cause of "staleness" than anxiety or worry?

60. Does best form in motor skills vary with the individual?

61. Does practice on parts need correction from the stress of the whole dynamic pattern?

62. Is the transfer negative if the stimulus remains the same but the response changes?

63. Does Thorndike's transfer theory of "identical elements" explain negative transfer?

64. Should specifically desired personality traits and developmental activities be planned for in the physical education program?

65. Should the teacher arrange for student discussion, approval, and adoption of specific personality development objectives?

Completion

I. Greater fatigue accompanies the early stages of learning because:
   1.
   2.
   3.

II. A sudden shift toward improvement following a recognition of more adaptable movement variations is called
   ....

III. Illusions from one sense may be corrected by cues from
   .. . .

IV. Signals are stimuli to which we supposedly have relatively ..... responses.

V. The most suitable form for an individual to use in performance of a skill will vary with his ..... , ... , and .....

VI. Some defeats in competitive athletics are of value as a means of:
1. Eliminating the tendency to be satisfied with present .....
2. Arousing greater effort toward ..... of achievement.
3. Focusing more attention on ..... of present .....

VII. Succeeding too easily tends to establish habits of ..... performance.

VIII. The superior teacher uses scales, tests, and performance examinations; but he uses them in cooperation with the students as a measure of determining ..... , parts needing greater ..... , ... to be corrected, and degree of approach to ..... goals.

IX. Educational development is a constructive, preventive, and therapeutic means of .....

X. Transfer may be increased by:
1. Setting up rules of procedure of general .....
2. Utilizing patterns of response in a ..... of situations.
3. Emphasizing form and .....
4. Keeping the school activities in as close conformity as possible to ..... needs.
5. Focusing on general ....., ideals, and traits of .....

XI. Personality is one's entire ..... expressed in the dynamics of behavior.

XII. Methods of personality development must be designed:
1. To decrease internal ..... of desires;
2. To develop in the individual definite ..... and ..... approved by society;
3. To train the individual in an integration of habits, attitudes, and methods of thinking which, expressed in behavior, bring benefit to ..... and happiness to .....

XIII. Ability to get along with others includes learning:
1. To see the ..... point of view;
2. To see ..... behavior objectively.

The following test items are added to stimulate the thinking of those students primarily interested in the coaching of athletic sports.

True-False

1. The first lessons for beginners in a sport should be lessons in detailed analysis of part-movements.
2. The skilled sports performer when performing at his best focuses his attention on how he, himself, is performing.
3. Attention should be called to minor errors in the early stages of motor learning.
4. Sports skills should be learned from the beginning under conditions of exacting competitive pressure.
5. In the early practices of a sport, the beginner should practice meaningful units of the sport, not isolated movements.
6. Coordination is a general trait and is acquired.
7. It is possible to learn to be adequately relaxed in the muscles in use in the sports skill even though intensely concerned about the outcome of the performance.
8. Sports skills are best performed with chief focus of attention on cues for action, and on results, with only at most a diffused amount of attention on the major features of the movement patterns.
9. The learner may need to be rehearsed in his own error in order to become aware of just what error he is making.
10. *Parts* of a skill seem to take on polish more rapidly when the learner sees them in the light of the total game background.
11. In no sport is the external appearance of the form used as its measure of efficiency in performing the skilled art.
12. Grace and beauty of appearance of a form are excellent criteria to use in judging the ease, efficiency, and success of form.
13. The needs of the next appropriate act should partially determine the advisability of a smooth "follow-through."
14. Physical condition or fitness is a general thing whereas skill is specific to the sport.
15. High rank in performance means high rank in cardio-vascular efficiency.
16. Speed in sports and games is a general factor and is chiefly hereditary.
17. Preparatory position is a factor in functional speed of response.
18. In some sports, accuracy demands great steadiness of the static posture.

19. Strength means ability to sustain muscle contraction over a period of time.

20. The strength of the individual may be an important factor in selection of appropriate form.

21. One can rank individuals correctly in the strength factor by ranking them as to size of muscle cross section.

22. It seems likely that there is a hereditary factor which partially limits an individual's level of strength development for sports.

23. The player has neither time nor opportunity, while the game is going on, for genuine thought (in the sense of reasoning).

24. Fatigue comes more quickly in non-habituated work than in habituated work.

25. Variety and diversity of response characterize the beginner.

26. Emotional intensity and muscular tension are likely to accompany the early stages of motor pattern learning.

27. It is perhaps unwise to correct every error the beginner makes in trying to play a game.

28. A team should be uniform in technique of motor skill behavior; *i.e.*, same batting stance, shooting form, and so forth, for each team member.

29. The most suitable form for an individual to use in performance of a skill is that used by the greatest expert in that skill.

30. The experienced baseball coach can tell the novice pitcher exactly what form he should use to throw a baseball.

31. The body should "coil" to some degree along its entire length in preparation for powerful "explosive" movements (jumping, punching, and so forth).

32. Gradual "warming up" and gradual "cooling off" have sound physiological justifications.

33. The onset of fatigue is characterized by a slower rate of muscular contraction.

34. Overwork is a more likely cause of "staleness" than anxiety or worry.

35. The development of endurance is a physiological training process.

36. Football linemen on offense should focus on the resultant charge, rather than on the starting signal.

37. Choice reactions are faster than simple reactions.

38. Preparatory stance is an element in performance speed.

39. Body momentum may begin before the feet have moved from their starting position.

40. Track sprint form favors the type of speedy running needed by the elusive halfback.

41. Accurate distance and space perceptions are learned abilities resulting from much practicing in perceiving distance and space in those sports.

42. One's perception of distance in playing areas varies with the background of the playing area.

43. Reactions reduced to non-thinking habits tend to be more accurate.

44. Great accuracy seems to necessitate daily practice to keep it even after it is once acquired.

45. Swinging three bats just before batting tends to help in hitting a fast ball but interferes with the hitting of a slow ball.

46. The strongest track man should therefore be the greatest shot putter.

47. One is skilled if he performs consistently with a high degree of success regardless of the form he uses.

48. Individuals seem to fluctuate from day to day in their degree of accuracy even if practice, diet, sleep habits, and so forth are kept constant.

Define: form, endurance, speed, accuracy, strength, power, balance, steadiness, relaxation and perception.

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VI.

How Is Physical Education Taught?

15.

Principles of Anticipation and Preparation[1]

"Successful accomplishments start with anticipating and preparing."

PHYSICAL EDUCATORS who served in the physical-training programs of the armed services discovered several shortages in their *initial* ability to be effective physical-training instructors. Some of these inadequacies were (1) inability to conduct effectively large groups of men in conditioning exercises, (2) inability to teach skills through mass athletics, (3) inability to administer "physical fitness" tests accurately, (4) inability to analyze test results and adjust program emphases accordingly, and (5) inability to give men who had finished training a simple valid set of exercises, suitable for a confined space, as a means of *maintaining* physical fitness. Some of the men

[1] This and the following chapters in Part Six include a great many principles of teaching. The beginning teacher may be helped by an explanation here that principles of teaching are not all of the same scope. Some are more inclusive than others. Some are more detailed than others. It may be helpful, therefore, to think of principles of teaching as capable of being ranked roughly according to their scope. Those that are more inclusive are of a higher echelon or strata (in scope), and, those that treat details are of a lower echelon. The point is *not* that the upper echelon principles necessarily are more important; rather they cover or refer to more activities to be performed by the teacher. Consequently, in Part Six, some principles will be supplemented by lists of teacher activities. Actually, many of the teacher activities are lower echelon principles but are worded to signify action. It is emphasized that the principles of teaching submitted constitute an incomplete list.

in charge of the armed services' programs observed that instructors who lacked professional education backgrounds but had leadership ability rapidly became outstanding instructors of the program offered. It should be mentioned that the purposes of this program were simpler and more easily accomplished than the purposes of a physical *education* program.

It is apparent that the instructors mentioned above needed *preparation* in techniques of teaching and class organization, in the selection of activities to attain certain objectives (activities suitable to use in the areas available), and in analysis of results of the teaching procedures. The following chapters discuss some of the principles of preparation, of management, of organization, and of method which apply to the teacher in the school situation.

ANTICIPATION

Accidents. *The teacher should anticipate accidents which might occur in the shower-locker-dressing rooms, field, pool, and floor, and should provide safety measures to prevent them.*[2] This principle like many principles may draw the remarks, "That's just good common sense. Anybody knows that." Judging from the scarcity of excellent teachers, many of the principles of teaching are either not known or not applied. Anticipating accidents refers not only to controlling the environment but also to controlling participation. The adventure inherent in many activities stems partially from the danger elements. To eliminate all of these elements from activities would be a sad mistake. Unpreventable accidents are bound to occur in physical education activities unless they are limited to a passive, insipid program. However, to fail to anticipate all *preventable* accidents and take precautionary measures is crass neglect. The teacher who fails to accept this responsibility shows signs of incompetence.

[2] Italic sentences in this and the following chapters in this part are to be regarded as principles of teaching.

Learning. *The teacher should anticipate learning difficulties.* With experience, the teacher becomes more adept and accurate in foreseeing areas of learning difficulty. He discovers that certain activities and parts thereof are learned more slowly than others by most students. He continually studies and experiments with ways of making such learnings more easily grasped. He apportions the time for learning activities as a result of this principle. The teacher also anticipates the fact that some learnings are not retained as long as others and tries harder to make his teaching of these things "stick." After knowing the class members, the teacher can anticipate learning difficulties of individuals, whether the problem be related to attitudes, knowledges, or skills. This principle of anticipation then applies to learning difficulties related to activities, to the class in general and to the individual. Talks with experienced teachers should soon let the young teacher know whether the learning difficulties he observes are common or whether there may be some weaknesses in his teaching.

Questions. *The teacher should anticipate questions about the activity or some related matter.* This principle might be considered to be a part of the previous one. It is given special consideration here because too often the novice teacher is unprepared for an appropriate pupil-question. Not to be able to give a clear concise answer to sincere pertinent questions is embarrassing to any good teacher. Involved answers not only take time away from participation but confuse about as often as they clarify.

Motivation. *The teacher should anticipate the need for motivation.* This principle of teaching applies not only to introducing a new activity, to participation in the activity by all or some students, but also to parts of the activity and to knowledges and attitudes as well as to skills.

Discipline. *The teacher should anticipate the possible need of discipline.* Few novices are apt to neglect this prin-

ciple. In fact, the danger is to be overly conscious of it with the resulting defensive, looking-for-trouble attitude. This principle includes such matters as anticipating the environmental set-up that may encourage misconduct.

Future activities. *The teacher should anticipate the physical education activities that are to be performed in the future.* The application of this principle by the teacher helps give continuity, relatedness, and cohesion to the program. The principle is based on the psychological theorem that in teaching we begin with "where the students are, what they can do, what they know." The principle includes the early dissemination of information and early use of bulletin board materials about the new activity before it actually is introduced in class. Also included is the use of lead-up activities, planning the month's, semester's, and year's programs, and providing for relationships between the school program of physical education and the community recreation program.

Equipment and supplies. *The teacher should anticipate the supplies and equipment that will be needed.* This principle applies to the next class as well as to next year. It includes repair and replacement.

Ability-finding. *The teacher should find out in advance the general background of ability of class members in the various physical education activities.* Following this principle aids in avoiding disciplinary problems, wasted time, negative attitudes. The application of the principle helps indicate the amount of time and attention to be given to, and the type of introductory steps to be taken in presenting, activities.

Use of the old. *In many situations the new teacher should anticipate having to use, at the start, the program, class organization, and routines established by his predecessor or those now in operation in a school.* If a new teacher is to work in a department under a direction of another person, he will not expect to effect changes for some time. Should the teacher replace another in a school where only one teacher is hired

to teach physical education, he will avoid anticipating the immediate inauguration of his own program. Failure to follow this principle may lead to confusion. The teacher plans, of course, for the time when he can start his own program, and set up better routines, class organization and management, keeping in mind the local school and community situations and realizing that any program must be flexible.

PERSONAL PREPARATIONS

Appearance. *The teacher should be prepared for each class "from head to foot."* This statement includes clean, neat, appropriate costumes, hair, dress, complexion. It may seem hardly necessary to mention such matters, and others such as clean teeth and fingernails, but visits over a broad geographical area have revealed that appearance is too frequently neglected even by teachers of physical education who also teach "health." Some of us apparently overlook or forget the fact that pupils are more strongly influenced by example than they are by precept.

The teacher should appear before his class in a physical education costume. Any experienced teacher who has, of absolute necessity, taken charge of a class in street clothes knows the effects even this slight change has upon pupils' behavior. The teacher's appearance is part of the environment that yields cues to pupil behavior.

The physical education teacher should have more than one physical education costume. This statement not only refers to the advisability of being dressed in a costume appropriate to the activity but also refers to the desirability of having changes in costumes so that they can be cleaned frequently. Women teachers of physical education so far have paid more attention to this basic step than have the men. The latter, however, are gradually turning to costumes made of materials that look neat and are easily and inexpensively cleaned, pressed, and mended.

The teacher should maintain a becoming carriage. Chil-

dren, their parents, and other teachers expect the teacher of physical education to have an easy, erect, poised bearing. They expect him to have a fairly well-developed physique. Not long ago a certain physical education class was visited by one of the authors. He arrived between classes. As the next class came onto the field, he saw the instructor lounging lazily under a tree on a bottom-up barrel. Finally the teacher got to his feet, shuffled onto the field, and called the class to order. It is not difficult to imagine the kind of physical education class it proved to be. No point is being made for meeting one's class in the best West Point tradition or for meeting them with outstretched arms, but it is difficult to justify a slovenly manner of setting the stage for a physical education lesson.

The modern physical educator should be careful of his appearance on occasions other than in physical education classes. His clothes are in appropriate style and fit, his shoes are in good repair, cleaned and brushed (even at the heel!), shirts and blouses are freshly laundered, and headgear is becoming and appropriate. These aspects of appearance are usually corrected, if they need to be, during the years as a college student. Sometimes a beginning teacher forgets these basic essentials when the unfamiliar responsibilities of teaching are heaped upon his inexperienced shoulders.

There is a decreasing tendency for physical educators, who were college athletes, to wear their letter-sweaters in public except upon such informal occasions as picnics, hikes, and winter-sport parties. On the street and in the classroom, the teacher of physical education does not call special attention to himself by such inappropriate dress.

As the novice prepares to be seen for the first time in the town or city in which he is to teach, as he prepares to be seen by the pupils of the school for the first time, as he prepares to meet his first class, he makes certain that his appearance is above reproach. Thereafter, he makes it a habit if it has

not been made so previously. The point is that not only does his grooming set an example, but it insures his being accepted, it removes the possibility of immediate criticism or fun-poking, and it gives him a feeling of confidence and poise.

Attitudes. As mentioned earlier, attitudes are the motive power behind behavior. If the teacher has a strong desire to be self-controlled, we say he will try diligently to develop the trait of *self-control.* It seems unnecessary to list the attitudes that lead to various desirable teacher-personality traits. However, there are certain attitudes that are *applications* of *combinations* of some of the essential traits which the novice should adopt before he faces his first class. The experienced teacher, through the constant adoption of certain attitudes, expresses them almost automatically from class to class, from day to day.

We have reference here to the adoption of such attitudes as:

1. *Regardless of any discouraging incident that may precede the meeting of this class, I will meet them and conduct the class with zest, eagerness, and affability.*
2. *Regardless of any present feeling of discomfiture, I will demonstrate appropriate energy and forcefulness.*
3. *Regardless of negative attitudes that a pupil or this class previously may have toward me, or vice versa, I will start again on the basis of friendly endeavor and cooperation.*
4. *Regardless of an inner feeling of timidity and shyness on my part, I will be pleasantly sociable, helpful, and approachable.*
5. *Regardless of the difficulties of being a successful teacher, I know I can teach effectively because I understand and am interested in these pupils and because I am well prepared to teach this lesson.*
6. *Regardless of the lack of courtesy that may be common in this community and in this class, they will learn courtesy, kindliness, and politeness through my example.*
7. *Regardless of the indifferent attitude that the community, school faculty, and pupils may have toward physical education, they can be gradually changed by my consistently "selling" physical education to them in a way that will appeal to them.*

There are scores of such attitudes that the teacher adopts,

depending upon the local situation and its problem. To the sophisticate and to some novices, such statements of attitudes may seem foolishly idealistic. Yet the practical psychologist, the experienced public speaker, and the veteran manager of groups that appear before the public know the value of adopting such preperformance attitudes as: "I like you and I know you're going to like me." There may be nothing in "mental telepathy," but slight changes in facial expressions, delicate inflections of voice, and imperceptible body postures are cues to behavior and tip-offs to feelings and mind-sets.

These attitudes should take the place of the original attitudes that might be adopted by novices and lead to failure. *Constructive attitudes, assumed by the teacher with vigor, drive out the attitudes of anxiety, doubt, resentment, apprehension, misgiving, discouragement, and fear.* Constructive attitudes give the teacher the inner feelings of confidence, friendliness, poise, and at least the appearance of possessing these traits. *There must be a genuine, sincere, and determined desire to adopt and make permanent the constructive, positive, hopeful types of attitudes.*

In addition to the possession of certain traits and attitudes, *the teacher must be actually prepared to teach the lesson and the class at hand.* Certainly the above suggestions are no substitutes for unpreparedness in the actual teaching.

Rather, these suggestions prepare the way for teaching. The teacher prepares himself with some kinds of attitudes for every class meeting. Why not make these attitudes as advantageous to successful teaching as possible?

TECHNICAL PREPARATIONS

A summer session graduate student asked this question after listening to the class discuss the foregoing problem: "How important is personal appearance, adoption of desirable traits, and demonstration of constructive attitudes, as compared with the *real* preparation necessary for the actual job of teaching?"

The question, in part, missed the point under discussion. The actual job of teaching *includes* "personal preparations" just as much as having the balls and bats on hand and the field marked. It is impossible to say whether "personal preparations" or "technical preparations" are more important. It is impossible to say which "cogs in a machine" are most important. All cogs, wheels, and belts in a machine are important if we want the machine to run. We can say, however, that a given part of the machine sets others in motion. The proposition is therefore advanced that the basic step in the teacher's immediate preparations relates to himself. The second step is the technical preparations he makes.

Needed information. *Before the teacher faces his first class, he should find out the regulations of the school.* This statement refers not only to novice teachers, new teachers in a locality, but to last year's teachers. Administrators sometimes change, over the summer vacation, their ideas about some things, including rules and regulations. Occasionally they forget to inform their teachers of such changes until the opening of school. Whatever the regulations are, they should be followed from the first day. The teacher should adopt a cooperative attitude. He should face the fact that it is his responsibility to be familiar with rules and regulations and policies.

The following are a few examples of information needed before school begins, and thus indicate teacher activities:

1. What is the system of registration and what are my duties?
2. Do I go to the classroom or the homeroom for my next physical education class, or do they come to the locker room or gymnasium without supervision, or does another teacher supervise them until they reach the locker room or gymnasium?
3. What system of excuses, tardinesses, and absences are used?
4. What are the signals for class dismissal and assemblage?
5. What is the length of a class period?
6. What are my duties when a class is dismissed from the locker room?

7. What is done about pupils who do not have physical education costumes?

8. What are the signals for fire drills?

9. What time must teachers arrive at school in the morning?

10. How long is the noon-recess period?

11. Do I have special duties during noon recess?

12. What are the arrangements for health examinations?

13. Where is the first-aid kit in the gymnasium, or the nearest one?

14. What is done with pupils who show symptoms of illness?

15. Am I supposed to teach physical education the first day or only meet the class?

16. If physical education classes are supposed to be taught previous to the health examination, what is done to safeguard pupils with physical defects, deficiencies, and other ailments and weaknesses?

17. What commands are pupils accustomed to in physical education classes for assemblage and dismissal?

18. What routines in the locker room have the pupils previously used?

19. When are lockers assigned? What lock system is used for lockers? If key-padlocks, when are keys distributed? Is a fee for the key or lock charged? What is done with the money?

20. What arrangements are there for lost and found articles?

21. Am I responsible for making any announcements at the first class meetings?

22. Does the administration favor using pupils as assistants in physical education classes such as is done in the squad-leader system?

23. Are all facilities and equipment ready for the first day they will be used?

24. What special information about this class or a given pupil should I have before meeting them?

25. Are there any special protective measures that should be applied? For example, are there an unusually large number of pupils with colds, measles, or scarlet fever, at the time school begins?

26. What school rules and regulations should be presented to the classes on the first day?

These examples suffice to show that the teacher secures all possible information about the pupils and the school's policies *before* he meets the first class. He avoids trouble, mistakes, and embarrassments by knowing what any teacher needs to know before his official duties begin. We have already re-

ferred in a previous chapter to the type of information the teacher should have relative to the community.

Objectives. Integral parts of preparing the first and tentative program include: a definite statement of the objectives of the department, the purposes and values of physical education for each grade, specific assignment of activities to each grade because of the assumed values of these activities for each respective grade, a statement of the outcomes that should emerge for each grade from his program, and the definite units of work for the pupils in each grade that should lead to the accomplishment of these outcomes. *The teacher should make certain that these objectives are in agreement with the stated objectives of the department, and that they are in conformity with administrative policies.* Each administrator has his own interpretations of such bits of educational philosophy as taking care of individual differences; the relative importance of the pupil's needs and interests; discipline; the purposes and place of physical education in the school; and the degree to which pupils should be permitted to participate in helping plan their own program.

There are a few educators who believe that the novice and new teacher are "taking chances" in permitting pupils some experience in self-direction and self-expression. These educators believe that the best thing for the new teacher to do is to adopt measures that will keep the pupils well under control until the teacher has established himself. There may be merit in this suggestion, particularly with young teachers. On the other hand, the first class meeting or two is not too early for the teacher to begin to establish a cooperative, friendly atmosphere. If classroom teachers can set up "controlled" situations that permit pupil-expression and planning during the first days of school, why cannot the physical education teacher do likewise? No final answer to this question is justifiable or sensible at this time. Too much depends upon the ability of the teacher and the type and background of pupil at hand.

Teacher-skills and knowledges. Another inseparable part of preparing the tentative program is for *the teacher to possess knowledges of and skills in the activities planned for each class.* There should be no "taking for granted" in this area. Unquestionable ability to demonstrate any skill in the activities to be introduced not only helps guarantee better teaching but gives the new teacher the much-needed self-confidence. Why face a class with such a thought as: "Boy! I hope I don't have to show them how to do *that!*"? Many a teacher supplements his knowledge of activities by purchasing appropriate books and pamphlets. These sources are increasingly helpful and available.

Some teachers purposely select activities for the first active class meeting in which they are particularly skillful. First impressions usually sink deeply. A child expects a teacher of physical education to be skillful in physical education activities just as a teacher of music is expected to be able to perform with a considerable degree of excellence. Sloppy performance by the teacher begets sloppy performances on the part of pupils, plus a loss of prestige for the teacher.

Teaching techniques and principles. *The teacher must plan generally how he is to teach.* For example, the teacher should have in mind how the class will be called together, the ways activities will be presented the first day, ways of getting the group into activity, methods of explanation, demonstration, and motivation, length of time spent in each activity or part thereof, how the groups or squads in the class will be changed from one activity to another, and how the class will be handled in the locker room before and after the activity period.

Some of these items border on a discussion of *class management,* which will be presented later. However, mentioning these items at this time seems to emphasize the inseparable relationship between teaching and class management. It is impossible to overemphasize to the novice teacher the necessity

of being prepared in as many ways as possible. Many novice teachers, as they face their first day, wish they had begun some of the preparations during their college years!

It is impossible, of course, for the new teacher to select beforehand the teaching techniques that definitely fit the classes he meets for the first time. Even though he is fortified with previous information about these pupils and with knowledge of the community and school, still he does not *know* the pupils. On the other hand, this necessarily incomplete background does not mean that the teacher should face his classes with no particular teaching techniques in mind. Individuals differ, but they are also similar in many respects, as we have seen. This fact, and the types of information previously indicated, give the teacher bases for presenting and teaching activities.

No one can predict the modifications and refinements in teaching techniques that will be necessary after the class begins, but the teacher can be prepared in basic, fundamental principles. The new teacher with experience will plan to use those techniques that proved successful in previous situations, with changes to fit the local situation as far as he knows and senses it. The novice teacher will use those techniques recommended by his major professors, those found in authentic texts and periodicals, those that seemed to work best during the weeks or months of practice-teaching, and perhaps other techniques demonstrated or suggested by critic teachers or other experienced teachers. He cautiously and alertly "feels his way along" in the use of various techniques.

Facilities, equipment, and supplies. *The new teacher should check equipment and supplies at the time of his survey of the situation sometime before the opening of school. Immediately before school begins he checks certain items again.* He ascertains whether the equipment has arrived which he may have ordered. He inflates balls that will be used. All equipment such as apparatus, showers, lockers, and doors are

inspected for sanitation, repair, serviceability, and safety. The victrola and piano are checked for serviceability. If the program of activities is to begin outdoors, the field should be marked the day before the first class, assuming that this is permissible. Checking on this last item at least informs the new teacher whether this task is done by a workman or is done by the physical education teacher. Occasionally a teacher discovers that, although the preliminary survey shows an available field, later checkup reveals that it is reserved for football practice only! Facilities are checked for hazards. Fields are inspected as to present surface condition for the type of outdoor program planned.

Even though the program of activities may be held outdoors, the first or second class meeting may be held indoors. In any case, the gymnasium should be checked for serviceability and sanitation. *The teacher should plan where pupils are to sit or stand. The gymnasium should be arranged so that it is free from hazards and temptations to misconduct.* If the first class period is to be one of discussion and announcements, *playing equipment should be conspicuous by its absence.* The locker rooms, shower rooms, towel room, and equipment rooms should be checked for serviceability and cleanliness. If lockers, keys, towels, or uniforms are to be issued, plans are made for successfully handling this task. Consideration should be given not only to pupil-traffic during issuance of supplies but *to an orderly system of distribution of such articles and of bookkeeping.*

Sometimes a teacher secures a position in a school that provides little or no equipment for the type of program in which he is prepared but does provide ample equipment in a type of program in which the teacher is not particularly well prepared or toward which he is not sympathetic. Assuming that this equipment is in good repair, it is the better part of wisdom to make use of it to a considerable degree for the first year. Most boards of education cannot afford to purchase quantities

of equipment in a given field only to have it discarded when a new teacher, with different ideas, arrives. Gradually, as the new teacher sells himself and his "new" program, suitable equipment for "his" type of program may be forthcoming.

A written inventory should be made of all supplies such as balls, bats, nets, and of all equipment, including apparatus and mats. The teacher also secures roll-books, cards, forms, blanks, and other materials for attendance taking, grading, recording, and reporting. He thus begins the year prepared to keep his accounts in a businesslike manner.

If the teacher plans to conduct a testing program during the first days of school and knows the test or tests he will use, or if he is in any way responsible for assisting in the arrangements and administration of the health examination, *necessary equipment, supplies, and setup should be in readiness.*

Personal equipment should be furnished by the teacher. A novice teacher once found himself without a whistle as he met his first class. His assumption had been that last year's teacher left his whistle "somewhere around the gymnasium." The wise teacher checks on his assumptions.

Budget. An item closely related to equipment and supplies is budget. *The teacher should ascertain before school starts the exact amount of money he has to spend for physical education.* He also finds out the source of these funds and if he may spend them as he sees fit, and if they can be increased. In many schools, even though a budget is available, it is necessary for the teacher to make out requisitions for all purchases. He should inform himself of the proper procedure in all such instances. It is better business practice, in any event, to have his purchases okayed by the proper administrative officer. All matters regarding budget do not demand study before school commences, but the items just mentioned should receive preliminary checkup. In some school systems no particular moneys are set aside for physical education. The teacher who is the best salesman of his needs receives most consideration.

If this situation prevails, the teacher should know it before the beginning of school so that he can "plan his case."

Personal relationships. In the midst of all these preparations *a teacher sometimes forgets one essential—namely, to begin the year "right" as regards those with whom he is to work.* Although the adage "First impressions are strongest" is not always true, there is no advantage in beginning the year in such a way as to give poor impressions. The new teacher with experience has an advantage over the novice teacher. The former knows, in a general way, of the attitudes, customs, unwritten codes, and points of view of teachers the country over. The novice easily overlooks the fact that he is judged severely by his colleagues as to appearance, behavior, and casual conversation. Many a young teacher starts the year "with two strikes on him" because of some innocent, thoughtless remark. The new teacher with experience knows *he should avoid negative comparisons of this locality, this climate, this town, this school, with others. He also avoids superlative statements of a complimentary nature. He knows he should avoid subjects of conversation that are directed at persons, personal affairs, financial affairs, religious matters, political parties, or one's alma mater.* The new teacher is a "master listener."

The new teacher aims to establish and maintain cordial relations with the administration, his colleagues, the pupils, the janitor, and other employees. The new teacher does not pattern his degree of cordiality after those who have served in this school before. He is pleasant but is also modest and reserved. He is as sincerely cordial to the janitor as he is the principal—that is, his degree of cordiality does not vary with school station and rank. *He should avoid confidences.* He refrains from giving the appearance of trying to "get in on the inside" with the group of teachers who are returning to this school. He shuns participating in whispered conversations. He avoids positive commitments and statements of

his policies. No reasonable person expects a newcomer to know what his policies will be until he has had an opportunity to become familiar with the situation. This last sentence provides a sensible, justifiable answer to those "oldtimers" who wish to "pump" the new teacher and wish to "test" him.

During the days or hours before school begins, the new teacher is sometimes told of the errors and mistakes of his predecessor. *Neither by word nor gesture does he indicate agreement in condemning his predecessor.* In fact, he should be prepared to keep the conversation on impersonal subjects. As a rule the persons who condemn the predecessor also will condemn the new teacher.

There are so many vital types of information that the new teacher should secure, as has been indicated, that there remains no time for these taboo conversational subjects. Teachers familiar with the local schools are usually ready to give professional advice to the new teacher. It goes without saying that the new teacher does not follow all the advice given him, although he does not say so! He may tactfully gather several viewpoints. As a rule, this process can be done casually and therefore is carried on beyond the first days, weeks, and months of school.

Former graduates returning as teachers. During these present days of vital economic transitions, many boards of education find it necessary to hire, as teachers, local boys and girls who have received the necessary professional preparation to teach. In some respects, their task is easier than that of other new teachers. On the other hand, they face problems that the new teacher is spared.

In the *first* place, the community and school personnel are apt to recall (and perhaps enlarge upon) this former pupil's weaknesses and mistakes. In the *second* place, his social level and circle of friends are apt to be determined, in the minds of his colleagues, before school begins. *Third,* it will be difficult for him to be regarded as a peer by teachers who

taught him. *Fourth,* the pupils may attempt to be over-familiar—both the sons and daughters of friends and "enemies" of this teacher's family. *Fifth,* the administrative officers are not so apt to regard his opinions and requests as seriously as those of a new "outsider." On the other hand, if he and his family are highly regarded, he may start the year with a distinct advantage over other new teachers. *The "home town" teacher should conduct himself in the same careful manner as any other new teacher.* The sole exception may be in the matter of cordiality with his colleagues. Nevertheless, he must demonstrate reserve. He must show that he has "grown up," that he knows how to act like a teacher, that he is there for business, that he needs help and advice, and that they can count on him to cooperate as a colleague and not as a former pupil.

Returning teachers. Not all that has been written in the previous paragraphs is confined to the new teacher, including the novice. The returning teacher is familiar with a great many of these matters. Yet he has the same responsibilities for full preparation before classes begin. In fact he has the added obligation of assisting the new teachers in becoming oriented, being greeted and introduced to other colleagues, and setting an example for novice and new teachers.

The authors cannot refrain from commenting on the practice of a few teachers (usually of mediocre ability) of posing as sophisticates before the novice regarding such matters as ideals, ambition, progressive methods, and other areas of endeavor that represent professional advancement. Almost in this same category is the returning teacher who attempts to inject his prejudices against the school administration, other teachers, pupils, and townspeople into the minds of the novice teacher. The young teacher cannot openly shun these persons, but he can refrain from being gullible.

It is assumed that each year should represent some improvements in the physical education program of a given school

under the leadership of a given teacher. *This statement means that the returning teacher also should make all necessary preparations for introducing the new program before classes start.*

The unprepared teacher. Students preparing to teach physical education in some states are greatly surprised to learn that in other states no certification in physical education is required. That is, in these latter states, any teacher may teach physical education. This book is not the place to comment on such a condition. Suffice it to say that, in contrast, other states require four years of professional education with the accompanying baccalaureate degree. The trend in state certification *seems* to be toward the requirement of a fifth year.

The fact is, therefore, that there are teachers who are unprepared to teach physical education but who have positions carrying this responsibility. The least these teachers can do is to *enroll in professional training courses in physical education* in the summer session previous to assuming such a position, *become members of the professional organizations* in their respective localities and states, join the American Association for Health, Physical Education, and Recreation, *carefully read the periodicals* issued by these organizations, *attend every professional meeting possible.* These teachers may also discuss their problems with well-trained teachers of physical education, purchase several reliable texts covering various aspects of the field, take correspondence or extension courses in physical education, establish correspondence with the head of a good professional education department in a college or university who may offer some assistance, or write for advice from an appropriate professor at the college from which the teacher was graduated.

The case of the unprepared teacher of physical education is believed to be somewhat serious in terms of the physical welfare of boys and girls. The unprepared teacher in mathe-

matics, English, or any field is deplorable. But the unprepared teacher who attempts to teach children in vigorous physical education activities lacks a knowledge of, among other things, first aid, the effects of activity upon the human organism, the dangers of having children with certain physical defects participate in vigorous activities, the symptoms of fatigue, the conduct of a modern program of physical education, or the safeguards accompanying activities that may result in temporary or permanent injury, and is therefore assuming a rather serious responsibility.

These pages of discussion of the principles and techniques of preparation before school begins do not represent a complete list. Rather, they offer suggestions of things that should be done and not done. The purpose of the discussion is to show the absolute necessity of careful preparation. Only in this way will the school year begin with as many forces as possible working for better teaching, not against it.

SAMPLE TEST ITEMS

True-False

1. That the teacher should be appropriately dressed at the beginning of the school year and thereafter is universally recognized by prospective teachers, hence need not be mentioned.
2. Just as doctors have, so should the physical educator have several changes of appropriate costumes.
3. The teacher's carriage gives cues for pupil behavior.
4. In order to impress the pupils properly at the beginning of school, a teacher should wear some athletic awards.
5. At the beginning of the year the teacher should "act natural."
6. Personality traits unpossessed by the young teacher are so difficult to acquire that it is almost useless to try to acquire them.
7. Idealistic attitudes are not realistic and therefore are to be ignored.
8. The new teacher can be certain that the superintendent or the principal will voluntarily furnish all necessary information before school begins.
9. The new teacher should have planned beforehand a program of physical education to be used until he knows the pupils and the situation better.

10. Even the novice teacher should permit liberal pupil expression from the first day of school and so on throughout the year.

11. Regardless of the teacher's ability to demonstrate a given activity, if he has decided to offer it the first day of school, he should offer it.

12. Although techniques are very specific, the novice teacher must make up his mind as to those techniques he will try out on the first day.

13. The teacher's personal equipment should be furnished by the teacher.

Multiple Choice

1. If a new teacher discovers that the only available field is restricted to football practice, he or she should:

a. Protest to the principal.
b. Complain to other teachers and to the landlady.
c. Discuss the possibility of using the field with the football coach.
d. Say and do nothing.

2. If a new teacher finds only equipment for a type of program in which he vehemently disbelieves, he or she should:

a. Protest to the principal.
b. Complain to other teachers and to the landlady.
c. Say nothing about it.
d. Make reasonable use of it until such a day as he may purchase equipment more suitable to "his" program.

3. In establishing proper relationships with other teachers, a new teacher:

a. Tells them about the advantages of his alma mater.
b. Tells them he is "almost broke" financially.
c. Compares the pupils with those he had last year.
d. Makes very complimentary comments to each one.

4. Teachers returning to a position for another year:

a. Do not need to prepare for the opening of school.
b. Should be of help to new teachers.
c. Should try to "line up" new teachers in "our crowd."
d. Should give personal advice at once to new teachers.

5. A teacher unprepared in physical education but who secures a position teaching it:

a. Should not be permitted to teach it.

b. Should take every possible step to strengthen his weaknesses as a teacher of physical education.
c. Has a graver responsibility than the unprepared teacher of history who secures a position to teach it.
d. Is always a failure.

16.

Principles of Class Management

"A crowd becomes a social organization through cooperatively determined and conducted regulations."

AN EXPERIENCED teacher is speaking: "During my four years of undergraduate professional education, I was taught to set up certain specified rules and regulations and make them operate beginning with the first day of school. Last summer I started my graduate study at ———— University. One of my instructors told us that rules, regulations, and routines should be worked out with the pupils. So I tried this last year."

"What results did you accomplish?"

"The results were excellent in the junior and senior high schools. I've never had pupils cooperate more fully and willingly in following out regulations. The trouble was that I wasted four or five class periods of class discussion to put it across. The pupils mentioned the need for some regulations governing such matters as: going to and from the gymnasium, keeping proper ventilation, distributing supplies, and keeping order in the locker room. But it took a lot of time to bring them around to suggesting such matters as the class being responsible for the conduct of the disorderly individual; sacrificing personal wishes, desires, and choices for those of others; and showing good sportmanship under all conditions."

"What was your success in the elementary school with this democratic method of establishing regulations?"

"Not so good. The younger the pupils were, the more I had to suggest what they were to do, although they did suggest a few regulations such as being quiet when the teacher talked and taking turns on the slide."

Teacher-imposed regulations vs. teacher-pupil cooperation. In recent years there is revival of the idea of offering *more opportunities for pupil-participation in various areas* of school life. Increased numbers of extracurricular activities, teaching former academic courses the "play way," and a consideration for pupils' interests are examples of this trend. In contradistinction to this trend, there is a recent revival of the idea that children should be made to do certain things whether they want to or not. This old controversy between these two schools of thought may continue for years. It touches at the very heart of democracy-applied-to-education. It therefore deserves the most careful consideration of every young and experienced teacher.

A reasonable position on the question at this time seems to be that *the pupil will develop in some ways by being permitted to take responsibility, to make decisions, to participate in creative activities, to manage, to lead, to follow, and to perform other activities of this developmental type. A reasonable position also indicates that the pupil will develop in other ways by carrying out work assigned to him, obeying and conforming to rules that are understood, and perhaps a very few that may not completely be understood at the moment.* There is merit in both points of view, although there is *too little emphasis* at present in *practice* upon developing pupil initiative and teacher-pupil cooperation.

But what does this have to do with class organization and conduct?

A school represents a complex social organization. Many persons are crowded in a relatively small area. They move about from place to place within a limited space. One of the chief purposes of the school is to provide and maintain an

environment that promotes learning. Regardless of how ultra-progressive the average school of today may become, *some rules and regulations are necessary.* Any social group, from the family to the nation, finds regulatory measures essential to insure better, efficient accomplishment of the purposes for which the group exists—that is, there must be some plans, some arrangements in the class that facilitate learning.

If the pupils cooperate more fully and willingly in carrying out these plans when they have helped construct regulations, or a good many of them at least, it seems sensible to encourage such participation. Even though it may take several class meetings to set up these regulations, is it not well worth the time if pupils cooperate better? Rules imposed upon a class by the teacher, and regulations the purpose of which the pupils do not understand and appreciate, too often result in pupil attitudes that stimulate nonconformity. Furthermore, if all or most rules and regulations are teacher-imposed, the teacher usually spends a good deal of thought, time, and energy throughout the year trying to enforce them. This "police work" of the teacher detracts considerably from his teaching. With some teachers, trying to enforce teacher-imposed regulations has made "police work" almost synonymous with teaching. If the teacher-pupil cooperative method eliminates a good deal of this "law-enforcement," is it not worth while to the teacher? The pupils? And could one call it "wasted time" even if the more democratic method takes longer?

This democratic method of managing a class has the further advantage of fitting into a plan for developing pupils. It is extremely difficult for pupils who desire to maintain the respect, confidence, and good will of their classmates to enforce rules laid down by the teacher. No teacher wishes to disrupt harmony between the members of a class. The situation is quite different when the pupils themselves have participated in making the plans for class organization and conduct.

ROUTINES

Class organization and conduct include certain routines even in schools administrated on an informal basis. The school and home join in making habitual certain acts in the daily life of the child. Dressing, manipulating the tools of eating, and stopping when the traffic light is red are examples. Routines "streamline" the day's task.

Specific reasons for routines.[1] The establishment of routines, *first* of all, makes it possible for the class to use judgment and initiative in attacking the processes in class management that demand such attention. *Second,* routines save time. When pupils know that they are to go from their last academic class to the locker room, dress as quickly as possible, report in the gymnasium or on the field, and respond a certain way to the whistle or the command to "fall in," all without special instructions, a good deal of time is saved. *Third,* routines facilitate pupil control or "discipline." The more often the pupil performs only after instruction is given, the more occasions there are when discipline may be necessary. Automatizing certain processes such as dressing and undressing, and distributing and collecting supplies contributes to these acts being done with dispatch and with a minimum of disorder and "waste motion." *Fourth,* routines contribute to class cooperation. Members of the class know what other members are doing. They act as a group in routinized procedures. Routines help pupils catch "the spirit of group action" as they work together, quickly accomplishing a given task. Class response to a given command and group action during marching tactics and fire drills are examples.

Fifth, routines contribute to law and order. The pupil certainly needs to learn respect for law, and the necessity of a certain amount of system to preserve order for the good of

[1] Avent, J. E., *Beginning Teaching,* pages 316–318. Knoxville: Joseph E. Avent, Publisher, 1931.

the group. This point is well illustrated in the home where cooperation between members of the family is practiced. Most pupils from such homes understand the necessity of conforming to establish codes of conduct. *Sixth,* routines make a good impression upon visitors. Teachers, even though they may desire to feel independent of outside opinion, need to consider what visitors expect to see in a physical education class. The visitor is favorably impressed, for example, if he is greeted immediately and made comfortable by some member of the class. The visitor is impressed favorably when a pupil quickly gathers the supplies at the close of the period and places them in the proper place. *Seventh,* routines become self-regulative. Explanations, instructions, and directions become unnecessary. The procedures that are routinized take place with a minimum of attention from the teacher. Thus excessive talking by the teacher is eliminated.

Establishing routines.[2] Changing a desired class procedure into a routine does not just happen. *First,* it requires leadership on the parts of the teacher and cooperation on the part of the pupils. In order to secure this cooperation, the teacher considers the background and stage of development of the pupils. *Second,* establishing routines is based upon the assumption that the pupils are capable of understanding the necessity for the routinized procedure. *Third,* pupils must already have developed or first develop a sense of responsibility, a desire for carrying out the procedures. *Fourth,* some routines need to be explained and discussed if the pupils may be expected to cooperate in establishing them. For example, the simple routine of falling in at a given signal (if the teacher believes this should be a preliminary step before presenting the lesson) should be explained. This initial explanation eliminates misunderstandings, hence, helps avoid disorder and "disciplinary cases."

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[2] *Ibid.,* pages 318–320.

Fifth, certain routines might be experimented with, if the teacher believes in the democratic method of establishing these routines. This experimentation not only stimulates interest in the routine itself but enables the pupils to discover the most efficient way of performing it. *Sixth,* as many as necessary of the routines should be practiced. If, at the sound of the whistle, command, or other signal at the beginning of the period, the members of the class are to stop their informal play immediately, deposit the supplies at a given spot, and fall in at once, it is necessary to practice these acts in the lower grades. It even may be necessary to practice greeting visitors. *Seventh,* after a routine is understood, it should be performed in the way agreed upon. The teacher stimulates the pupils to take pride in performing the routine correctly. Incorrect performance of a routine is instantly corrected as is done in building any habit.

It is suggested that throughout this period of establishing the routines the teacher approach the task with the idea foremost that he must secure pupil cooperation, although it may be necessary for him to request, insist, and order in a few cases. In the elementary grades there is a greater willingness to "do it for teacher" than there is in the secondary grades. Finally, the teacher, as in the case of other pupil learnings, must persevere in his task, and do it with patience.

Principles of class management. The tasks that can and should be routinized may vary in different teaching situations. The following lists of routines are principles of class management. They are stated in such a way as to suggest direct and indirect teacher or pupil activities. Which of the routines refer only to the teacher, which refer only to the pupils, and which refer to both teacher and pupil?

A. *Healthful school living.*

1. Knowing the location of, steps to follow in the use of, and types of injuries that should be treated through the use of the first-

aid equipment. Knowing how and where to find the school physician or a physician.

2. Taking safety precautions in the use of such apparatus as parallel bars and high bar.

3. Refraining from participating in pranks that may lead to injuries and accidents; for example, running on the platform of the swimming pool and scuffling in the locker and shower rooms.

4. Inspecting equipment and having a definite place for it.

5. Checking the temperature of the gymnasium (58–60°).

6. Checking the ventilation of the gymnasium.

7. Keeping clean and in repair the locker room, shower room, towel room, lavatories, gymnasium, and field; eliminating materials that are fire hazards.

8. Keeping the gymnasium costumes clean and sanitary.

9. Keeping the drinking fountains clean and sanitary.

10. Keeping the shower room floor free of soap; keeping the liquid soap system in operation.

11. Being alert for signs of illness, overfatigue, and undernourishment in pupils and sending all questionable cases to the nurse.

12. Planning beforehand what to do in such cases of emergency as fainting, broken bones, nosebleed.

13. Checking on the artificial light and lighting systems in the gymnasium.

14. Selecting activities that are not too hazardous for the pupils, considering the facilities available.

15. Checking on the sanitation, filtration, and sterilization of the swimming pool.

16. Eliminating the sources of disagreeable odors, if possible; if not possible, using a deodorant.

17. Providing a reasonable length of time for shower baths.

18. Keeping halls and exits clear of obstacles.

19. Keeping gymnasium and field free of accident hazards.

20. Providing a suitable program of activities for the physically handicapped.

21. Providing some system whereby each pupil uses a clean towel after a shower bath and after washing.

22. Providing warm water for washing and showers.

23. Eliminating the habit of pupils' expectorating on the floor of the gymnasium and locker room.

24. Determining whether the weather indicates an indoor or outdoor program.

Many of these items suggest the need of cooperation from the janitor. The oft-repeated phrase "Make the janitor your best friend" takes on meaning when one reflects on the problem of how some of these routines are to be accomplished. Most routines demand teacher-pupil cooperation and cooperation from one's colleagues.

B. *Record keeping.* In the previous chapter we discussed the need for business-like methods in keeping various kinds of records. Routines in this area include such items as:

1. Taking attendance; recording excuses.
2. Itemizing equipment and supplies on hand, and their condition.
3. Recording equipment and supplies ordered.
4. Keeping results of tests, scales, ratings, classifications.
5. Noting reports of progress; grades.
6. Recording available and pertinent data from the health examination records.
7. Recording teaching schedules; sports schedules.
8. Keeping an account of appointments for conferences.
9. Recording injuries and accidents; dispositions made of each case.
10. Keeping a record of participation of squad members in activities, data, amount of time, location, name of sport.
11. Selecting, following up, and recording borrowed supplies.
12. Establishing a system of records and reports.

C. *The conduct of classes.* The following items are examples of those routinized procedures that may be used almost daily. Many of the principles and techniques presented in this present chapter are inseparably related to those in the previous chapters. The various items combine to form the basis for class organization and conduct, which is presented in the following section of this chapter.

1. Maintaining order as class marches to gymnasium or locker room.
2. Conforming to agreed-upon traffic plan in locker room.
3. Dressing in physical education costumes as quickly as possible;

locking lockers and otherwise making street clothes and valuables safe.

4. Avoiding the practice of loitering in a locker room after being dressed for activity.

5. Responding immediately and correctly to the signal to fall in according to plan agreed upon, or other system of starting class.

6. Responding to roll call; checking attendance, taking care of excused absences.

7. Responding immediately and correctly to any commands or signs agreed upon that are necessary for individual, squad, or group movements.

8. Preparing and distributing supplies according to plan; preparing and arranging equipment.

9. Securing permission to be excused from class when necessary.

10. Passing with dispatch and order from one activity center on the floor or field to the next activity center.

11. Greeting visitors.

12. Following out lesson plans (with judicious flexibility).

13. Providing an adequate period of activity for warming up.

14. Providing an appropriate period of vigorous activity.

15. Providing an appropriate period for cooling down.

16. Selecting techniques of instruction that are in conformity with the principles of mental hygiene and psychology.

17. Making use of the bulletin board for presenting information.

18. Periodically looking at the bulletin board.

19. Conducting the class on scheduled time.

20. Establishing and following a given plan of marking.

21. Collecting and storing supplies; replacing equipment.

22. Dismissing class.

23. Passing to the locker room.

24. Following pre-arranged plan for taking a shower bath, securing towel, taking care of physical education uniform, preparing to leave locker room, moving to next class.

25. Conforming to the rules of activities.

26. Conforming to school regulations and customs.

27. Caring for personal property such as books and tablets.

28. Caring for school property.

29. Memorizing the names of pupils the first day.

30. Being punctual.

31. Using same terminology for desired responses.

OTHER PRINCIPLES OF CLASS MANAGEMENT

The question might be asked: "Do you believe all of the above-listed items can be routinized?" There is no dictatorial "yes" or "no" answer to that question. These items are, at best, a partial list, as any experienced teacher knows. Some of them might be impossible to routinize under certain conditions. The point is that those class procedures are made habitual which can and should be routinized for the reasons listed on pages 414 and 415. Perhaps some of the following procedures also might be considered just as needful of being routinized as some of the preceding items. The difficulty is that most of the following items are of a different nature. They are more complex in execution. Most of them demand judgment before or during the time they are being performed. Situations in which many of the following procedures are used vary so greatly that automatic responses are impossible or ill-advised. The following examples of procedures are classified into these categories: (1) teaching physical education activities, (2) reporting and recording, and (3) facilities and equipment.

TEACHING PHYSICAL EDUCATION ACTIVITIES

The following principles are related more to the *framework* of the teaching of activities than to the actual teaching of activities. These principles refer to securing good class management for the purpose of teaching activities and are worded to indicate action.

1. Considering the pupil's viewpoint.
2. Requiring obedience when necessary, in a congenial manner whenever possible.
3. Securing a mastery of the lesson to be taught.
4. Securing attention and order before speaking or teaching.
5. Selecting pupil leaders, whether pupil-elected or teacher-appointed, as early in the year as possible.
6. Making use of pupil leaders.

7. Providing opportunity for developing leadership in pupils other than selected pupil leaders.

8. Giving ready and sincere acknowledgment of excellence, merit, and ability.

9. Enlisting pupil aid whenever appropriate in such matters as making decisions and formulating rules.

10. Informing pupil leaders of daily plan of lessons sufficiently in advance so that they may be prepared.

11. Providing a program of activity for pupils who arrive before the class assembles.

12. Providing a program of activity for pupils who remain after class, if this is permissible under the school regulations.

13. Developing the spirit and practice of self-discipline and class responsibility.

14. Placing emphasis upon positive rather than negative conduct.

15. Supervising, at least indirectly, all activities during the class period.

16. Cultivating a good speaking voice in contradistinction to a raspy, unpleasant voice.

17. Beginning the class period with the group together and dismissing the class with the group together.

18. Avoiding special attention to pupils of the opposite sex; avoiding "crushes."

19. Adopting a sympathetic attitude toward pupils and avoiding remarks that appear to ridicule, nag, or slight pupils.

20. Avoiding the habit of blowing the whistle too frequently.

21. Trusting rather than "watching."

22. Permitting no pupil to "get away with" conduct that may lead to habits that will have to be broken later.

23. Remembering requirements, agreements, assigned responsibilities.

24. Avoiding participation in an argument with a pupil at any time.

25. Encouraging enthusiastic responses on the part of pupils.

26. Refraining from giving a series of progressive commands or orders until each prerequisite command is understood and learned.

27. Encouraging and permitting only courteous attitudes between pupils, toward yourself, and toward other teachers.

28. Keeping the right degree of social distance between you and the pupil, according to the situation.

29. Avoiding the malpractice of holding grudges against a pupil

or "loading" the pupils with the after-effects of difficulties you may have in or outside of class.

30. Striving to be a good teacher even at the temporary sacrifice of being thought of as a "good fellow."

31. Keeping control continually of the teaching situation without being dictatorial.

32. Keeping control of one's temper and maintaining poise at all times.

33. Conducting the program so that the pupils enjoy it but also in such a way that they respect it.

34. Displaying a sense of humor at all appropriate times.

35. Using proper disciplinary measures appropriate to the kind and degree of misconduct.

36. Giving minor problems and major problems proportionate time, energy, and thought.

37. Keeping the classwork moving toward objectives that have been agreed upon.

38. Finding and considering pupils' interests, peculiarities, abilities, and needs in the selection of activities and techniques of instruction.

39. Determining the relative value of activities before they are selected and after elements in the teaching situation are considered.

40. Helping pupils set up their own objectives before or during each lesson.

41. Providing an expanding program of physical education experiences for pupils as they meet the present ones.

42. Stimulating pupils to develop new interests in other areas of school life.

43. Taking time to explain school regulations, if necessary.

44. Stimulating pupils to respect the rights and privileges of others.

45. Adopting and applying health procedures.

46. Stimulating superior pupils to be helpful to other pupils.

47. Guiding pupils in constructing or selecting some of the tests to be used, administering tests for whatever purposes they are designed.

48. Integrating physical education with other school subjects wherever and whenever this is possible and advisable.

49. Adapting the program, without a complaining attitude, to the facilities and equipment available, inadequate though they may be.

50. Arranging contests within class periods and between classes.

51. Avoiding teacher domination in participation in activities.

52. Providing a variety of activities for each grade without sacrificing an opportunity for pupils to learn each activity reasonably well.
53. Using the physical education period as an opportunity or as the basis for pupil guidance and personality adjustment.
54. Recognizing commendable followership.

REPORTING AND RECORD-KEEPING

In addition to the routines for record-keeping listed on page 418, there are other procedures, most of which are not usually routinized but are nevertheless to be considered as principles of class management:

1. Writing, recording, and filing plans.
2. Recording estimates of the degree to which pupils demonstrate positive and negative physical, social, and mental traits.
3. Writing and recording the aim and objectives of physical education for each grade, for each activity.
4. Preparing a course of study.
5. Writing and recording a statement of your philosophy of physical education.
6. Writing and recording an outline of each public address you deliver, including the date and occasion.
7. Recording all lesson plans, even though they are discarded, with written revisions appended.
8. Making a note of occasion when techniques of instruction fail to bring results and occasions when they seem to work unusually well.
9. Keeping a carbon copy of all correspondence; promptness in answering correspondence.
10. Keeping a permanent record of the results of all test data.
11. Reporting absences, tardiness, marks, promotions, and other similar information required by other offices, promptly.
12. Keeping a register if so required.
13. Making a written annual report of your accomplishments and problems.
14. Recording the program of activities in which each grade participates.
15. Keeping records up to date.
16. Constructing and submitting budgets.
17. Recording and reporting accidents, illnesses occurring in class, and cases dismissed from class and sent to the school nurse.

FACILITIES AND EQUIPMENT

There are other procedures in addition to the routines listed under "Healthful School Living," pages 416–418, and under "The Conduct of Classes," pages 418–419, that relate to facilities and equipment. These principles of class management often are not routinized although they are essential activities of the teacher. The reader will recall that they are purposely presented to suggest teacher and pupil activities:

1. Repairing or discarding equipment that is broken or worn out.
2. Inflating balls.
3. Deflating balls not in active use.
4. Cleaning, laundering, labeling, and storing equipment and supplies not in active use.
5. Having towels and physical education costumes laundered frequently if this is the school's responsibility; seeing that pupils supply themselves with clean towels and costumes if possible; if not, taking steps to secure these materials for the pupils.
6. Providing the best quality of equipment and supplies possible under budgetary limitations.
7. Keeping fresh supplies in first-aid kits.
8. Providing facilities and equipment for drying wet supplies.
9. Providing satisfactory types of storage space for different kinds of supplies and equipment.
10. Protecting equipment rooms against fire and theft.
11. Providing safe places for pupils to store personal belongings and valuables.
12. Keeping shelves, cupboards, and storage areas clean.
13. Providing physical education costumes for indigent pupils by various means.
14. Attempting to provide by various means adequate and satisfactory supplies if the school does not furnish them.
15. Keeping all parts of the gymnasium and the fields in good repair throughout the year, particularly during the seasons when they are being used.
16. Securing cooperation from the janitor in keeping the shower room, locker room, and gymnasium clean and sanitary.
17. Securing cooperation from the janitor in keeping the plumbing in good order.

18. Securing cooperation from the janitor in keeping the swimming pool clean and sanitary throughout the school year, and keeping the machinery for sterilization and filtration effectively functioning.

19. Making available physical education facilities and supplies for community use, if this is in conformity with the administrative policies of the school.

20. Cooperating with the janitor in conducting classes so that no unnecessary dirt and refuse are deposited in the gymnasium and its auxiliary rooms.

21. Cooperating with the janitor in teaching pupils the proper use of toilets, showers, and liquid soap system, and seeing that this teaching "takes" and "sticks."

22. Anticipating your needs as regards facilities, equipment, and supplies, and presenting this information to the proper authorities so that they fully realize the importance of these needs.

23. Dividing the fields into areas for various groups for use during recess periods, before and after school, and out-of-school hours.

24. Preparing charts of the gymnasium with the different activity areas labeled for each class, assuming that the squad system of instruction is used.

25. Taking all precautions possible in connection with facilities and equipment to insure the safety of pupils.

SAMPLE TEST ITEMS

True-False

1. If given the opportunity, pupils will immediately suggest all situations which need regulations and routines.

2. In a class conducted on the democratic principle, regulations are unnecessary.

3. The justification of regulations in the physical education class is that learning is facilitated.

4. Routines established in physical education classes are chiefly to lighten the task of the teacher.

5. "Practice makes perfect" is the sole principle governing the development of procedures into routines.

6. The proper carrying out of routines is chiefly the teacher's responsibility because it is he who selects the procedures that should be routinized.

7. "Considering the pupil's viewpoint" is a teaching principle that facilitates class management.

8. The physical educator should always make available the physical education facilities to the townspeople.

9. All phases of class management should be routinized.

10. A "democratic" playfield provides that any child may play on any part of the field at any time during the school hours.

BIBLIOGRAPHY

See Bibliography at the end of Chapter 17.

17.

Principles of Class Organization and Conduct

"Cooperation usually ceases and the social group often revolts when those in authority impose too many regulations and enforce them too rapidly."

LISTING SOME of the principles related to class routines and class management, as has just been done, may be satisfactory as indicative of scope and detail. However, such lists do not permit discussions of exceptions and special applications, particularly as regards the organization and conduct of classes. For example, some of the principles listed in the previous chapter are impossible of realization in certain situations because of school policies and regulations, while others are impractical because the local situation does not provide opportunities for the functioning of such principles. Take, for example, the case of sending a pupil who appears to be ill to the school nurse or physician. Although this may be a principle, still some schools provide no school nurse or physician.

Some schools have neither a field nor gymnasium, while other schools do not even require a physical education costume of high school pupils. Such conditions demand special consideration. It therefore seems advisable to discuss a few principles in greater detail as they relate to the organization and conduct of classes.

Scheduling physical education classes. Many teachers hinder the development of their own programs by failure to spend some time and thought on certain problems that are basic to the organization and conduct of classes. For example, there is continuous and emphatic complaint from teachers that the proper scheduling of physical education classes is impossible. *The teacher should intelligently try to have physical education scheduled at times most beneficial to the pupils.* How many teachers have presented any kind of scheduling plan to their administrator? Have worked out with their principals some scheme of scheduling that is practical? Have noted the objections of the school administration to their first plans, revised them, and presented new ones for consideration? All of these efforts are often futile, of course, unless the administration is "sold" on physical education so that administrative criticism may precede attempts to improve scheduling.

For many years some physical educators have objected to the first periods in morning and afternoon being used for physical education classes. Without these two periods each day the administrators' task of building a weekly schedule is made much more difficult and physical education is at a disadvantage to all other subjects. One reason given for avoiding these hours is that the students do not need physical education at these two periods. The inferences are (1) that most students have just engaged in a vigorous recreational program and (2) that physical education is chiefly a therapeutic to the ill effects of academic classes. Both inferences are open to serious question.

The second reason given by the objecting physical educators is that vigorous physical activity should not follow meals. A war-time committee of qualified physicians, physiologists, and health consultants made a report [1] which largely clears

[1] Steinhaus, Arthur H., *et al.*, "The Role of Exercise in Physical Fitness," *The Journal of Health and Physical Education*, Vol. 14, No. 6, June, 1943, pp. 299, 300, 345.

even "great physical exertion" after meals of being harmful to *normal* participants, if the exercise does not involve emotional strain. The latter factor hinders digestion, not the exercise.

Managing facilities and equipment. Adequate provision of facilities and equipment for the program of physical education is still an unsolved problem in many schools.

It is encouraging to note, however, that the old alibi, "I have a poor program of physical education because poor facilities and equipment are provided," is gradually being used less and less. There are five reasons. *First*, teachers are being trained to offer fairly good programs in spite of poor materials and facilities. *Second*, teachers are beginning to assume the responsibility of "selling" physical education to their administrators with resultant financial support. *Third*, public interest in athletics demands facilities and equipment that also may be used in physical education classes. *Fourth*, the present general recognition of the values of recreation and health education has tended to stimulate support for physical education. *Fifth*, state legislation requiring the teaching of physical education in schools has gradually brought about better facilities and equipment.

These five reasons are intended also to indicate that the problem of facilities and equipment for physical education is not nearly so acute as it was two decades ago. Among other reasons facilities and equipment are important because they are aids in the organization and conduct of classes. *Facilities and equipment should be adequately provided and so managed that class organization and conduct are facilitated.*

Environmental cues. *All factors in the environment provide cues for pupil conduct and behavior.* Experienced teachers know that such a simple thing as marking the field or floor for a given activity serves as a substantial stimulus for pupils to participate in that activity. A disorderly, unsanitary locker room is hardly a cue for order and cleanliness. *The teacher's manner and appearance is a cue for eagerness*

or indifference on the part of pupils. There is no question that facilities prepared for use, equipment in readiness, and supplies on hand, efficiently distributed and collected, all influence the attitude and behavior of the class. *The teacher should recognize the importance of making the necessary preparations for each class with regard to facilities and equipment.* He should plan to have these cues work indirectly for him instead of against him.

Indoor markings. Organizing and conducting classes are facilitated by the proper management of facilities and equipment. *The gymnasium and field should be made ready for classes before school begins. Suitable markings should be painted on the floor for the activities that are to be regularly used.* The markings for activities consistently used from year to year will last longer if a coat or two of varnish is applied over the painted lines. The various markings may be painted in different and pale colors to make easier the recognition of the lines used in a particular game. Suitable markings may be very helpful in the organization and conduct of classes. Markings are also sometimes used in locker and shower rooms as aids in directing pupil traffic.

Temporary lines for activities are often placed on the gymnasium floor with a piece of chalk. Some teachers prefer to permit the squad leaders to do this lining. Other teachers prefer to do it themselves *before the class meets* so that no time is consumed in such tasks and to make certain that the lines properly outline the shape and size of the desired areas.

Another plan for marking off temporary areas in the gymnasium is the use of "markers." These markers consist of colored four-inch cloth pennants secured to the top of a six-, eight-, or ten-inch spiral spring such as is commonly used on a screen door. The bottom of the spiral spring is secured to a round piece of flat rubber-matting about twelve inches in diameter. These "markers" may be placed quickly on the floor, designating an area of any shape or size. They do not

scratch the floor, waste chalk, and do not leave a mark that has to be erased before the next class meets. In any event, areas should be laid out if possible so that no group has to face the glare of the sun or light through the windows. Temporary markings may also be used in conducting such activities as relays and set skill routines; for example, the execution of "right-face" and the pivot in basketball can be diagrammed on the floor as a pattern for the learner. It should be pointed out that proper execution in such a situation is not a guarantee of proper execution under other circumstances. Temporary markings are also used for such activities as the standing broad-jump and change-of-direction races, as well as for modified games like basketball-golf and "twenty-one."

Markings facilitate the conduct and control of groups during an activity. This point is well illustrated by the use of a "player's box" for the offensive team in such games as indoor baseball and long-ball. Every teacher knows how difficult it is to keep the batting team out of the way of the fielding team. The penalty for being out of the "player's box" is one "out" for each offense, except in the case of the player at bat. Classes are "controlled" not only for the sake of organization and order but for the sake of safety. For example, in the illustration just given, the "player's box" tends to prevent collisions between pupils and pupils' being hit by an accidentally thrown bat.

Some teachers have a space marked on the floor within which supplies are kept before distribution to the various activity groups and to which supplies are returned at the close of the period. Other teachers have such marked spaces at intervals along one side of the gymnasium, a designated area for each squad's supplies.

In overcrowded locker rooms there is apt to be some confusion and disorder when pupils are attempting to dress and undress quickly. Arguments between children sometimes arise over their respective rightful areas for dressing. Some

teachers eliminate this problem by having lines painted on the floor setting off the area in front of each locker to which each occupant is entitled. This may appear to some readers as a minor problem and an expensive solution. But to those teachers who know what crowded conditions are in localities where lessons in sociability and cooperation are taught slowly, almost any solution that insures better organization and conduct of classes is welcome.

Parallel lines painted on the locker-room floor in front of the towel or supply window tend to keep the pupils in line. There may be some objection from certain teachers that pupils should be taught to stand in line, to recognize their respective areas in front of lockers and in the shower room, and to refrain from running onto the floor during an indoor baseball game when it is their team's turn at bat. *The point is that children should be aided in their learning to practice self-control and self-discipline.* There is no fundamental disagreement with this idea. If a teacher works in a school where these learnings can be acquired without the aid of such a device as markings, with a minimum of "police work" and constant discipline, so much the better. *There are situations, however, where teachers need every possible device to facilitate class organization and conduct.* Cities protect pedestrians by painting "lanes" for foot traffic even though automobile drivers should have enough self-control, self-discipline, and social responsibility to respect human life, and even though pedestrians should know enough not to jaywalk. Areas in front of fire hydrants are also marked. Areas in theaters have to be roped off. The point is that, when one encounters the problems of handling groups effectively and efficiently under certain conditions, devices help. *The individual may possess or acquire self-control, but regulations help a crowd exercise self-control.* Markings serve as an aid in making regulations function.

Outdoor markings. Many of the above statements regard-

ing the value and purpose of markings apply to outdoor markings, but there are a few additional points to be considered. Various age, ability, or sex groups are often given specific play areas during recess periods. *These areas should be carefully selected for the safety and protection of the respective groups.* These marked areas vary in shape and size according to types of activities engaged in by the different groups. It is recommended that in most situations all such areas be separated by markings. These lines are made of contrasting color of soil, sawdust, whitewash, sand, powdered limestone, and such commercial products as "Congaree Marker" or "Stag Line White."

Considerable care and caution should be exercised in the use of lime. If it is used for markings, it should be *thoroughly* slaked or hydrated, otherwise children may be burned by it. The type of material used for lines depends upon climatic conditions, purpose, and funds available. Most of the commercial products for marking fields come in fifty-pound bags and cost about two cents a pound in small quantities. It might be added that sod or clay tennis courts can be marked with powdered dry lime. The marks will last longer if the ground is dampened before the lime is applied. One reason dry lime is more desirable for use on tennis courts than on the general school playfield is because usually older and more skillful pupils play tennis. Another reason is that, when it is used in a mechanical marker, dry lime makes a distinct line and little material is wasted. The thin coat of dry lime soon becomes air-slaked. A third reason is that there are few occasions when a pupil falls down playing tennis; hence, the pupil is not liable to be burned before the lime becomes air-slaked.

The markings on tennis courts and other playing areas should be laid out north and south so that the morning and afternoon sun is not faced directly by contestants. In baseball, a hypothetical line drawn from the center of home plate,

through the center of the pitcher's "slab," and to the center of second base, should point approximately south by east.

System in the locker room. There is a place for the development of self-expression in children, but the locker room in the average school is hardly that place. So little time is allocated to physical education in most schools that the time spent in the locker room before and after the physical education period is necessarily short. This, together with pupil-traffic, the customarily crowded conditions, and the activity of dressing and undressing, combine to necessitate (1) *the need for systematic planning of the time spent in the locker room,* (2) *the organization of pupils in the locker room, and* (3) *the systematic arrangement of lockers and other equipment.* It is impossible to suggest what the system within the locker room should be or how the equipment within it should be laid out. The variety of shapes, sizes, and types of locker rooms and the divergence in the relationship of locker room to toilets, supply rooms, gymnasiums, and shower room prevent generalizations as to the handling of pupils in the locker room.

The teacher who has some voice in planning a new gymnasium will find Blair's [2] work on facilities helpful. Other things being equal, *the aisles between the rows of lockers should be at right angles to the sources of natural light.* But if this arrangement results in the disorganization of traffic to the gymnasium, toilets, shower room, towel window, and supply room, *the latter factors should receive first consideration.* That teacher's time is well spent when used in carefully working out each detail of planning the locker room and the pupil activity related to it.

Dressing for class. In the junior and senior high schools, a given number of minutes, usually from seven to ten, is allotted for dressing in the physical education costumes and reporting for class. *This dressing period should be of reason-*

[2] Blair, H., *Physical Educational Facilities for the Modern Junior and Senior High School.* New York: A. S. Barnes and Company, 1938.

able length but should be kept to a minimum. Some teachers have shortened the period by promoting attractive informal preclass activities. Other teachers have been successful in eliminating slow dressing by initiating a yearly series of from twenty to fifty self-testing activities appropriate to the ability and age of the group and arranged progressively according to difficulty. Points are given for successful performances and awards given at the end of the year. Teachers who object to material awards base part of each semester's mark in physical education upon the number of these stunts successfully passed. Still other teachers stimulate the pupils to dress as rapidly as possible by permitting the first pupils on the floor to be leaders of the different squad activities during that class period. The first pupils to report after those who are to be the leaders for the period have first choice of the activities in which they are to participate first. The last ones to report receive no choice. Other teachers find competition in rapidity of dressing a successful plan, rewarding those who first report with commendatory remarks.

Falling in. *The signal for assembling or falling in should be given at the same relative time for a given class. The pupils fall in according to the plan agreed upon.* Some teachers permit the pupils to assemble without using any special formation. Others have the class assemble in a circle, standing or sitting on the floor around the instructor. Still other teachers have the group fall in according to squads, each consisting of from six to fifteen individuals. Many teachers still like to have their classes line up in a single or double line in "class-front," according to height or some other plan. There is no one "best" way of assembling a class on the field or on the gymnasium floor. Each plan has its advantages. Some teachers may organize the class into squads but take the attendance themselves until they are better acquainted with the pupils and the situation.

There are also strong advocates of taking attendance by

having numbers painted on the floor. Each pupil in each class stands on the number given to him the first day the class meets. These numbers usually are arranged along the side of the floor so that the class assembles in a "class front." Another number plan of roll call is used wherein the pupil is given a number on the first day and retains it throughout the year. He gives this number verbally to the teacher as he reports on the floor after dressing for the physical education class, or at a given time during the class. Some teachers also consider it necessary for the pupil to report his number as he returns to the locker room after the physical education class. Still other teachers take roll while the pupils are in the locker room after the activity period is over. No numbers are used and no names are called. This method is suitable to small classes and is a timesaver. *Whatever the system of attendance taking, the principle is that it should be:* (1) *timesaving,* (2) *easy to record, and* (3) *accurate.*

Apportioning space to activities. One of the leftovers from the systems of physical education imported from foreign countries is the practice of teaching one activity at a time to the entire class. In contradistinction to this is the ideal of individualized instruction. It was formerly believed that classes numbering in the neighborhood of eighty pupils on a small floor could be offered only some form of a formal program. In recent years ingenious teachers have shown that the modern program may be offered even under these and more restricted conditions.

The plan whereby several subdivisions of a class engage in different activities at the same time is an expected supplement to the squad system of class organization. Class organization and functioning are believed by many teachers to be facilitated if each pupil is placed in a definite squad. It is maintained that the teacher is better enabled to keep a record of the type of activity and length of time each pupil participates in each activity. It is also proposed that this plan facilitates

the provision of a suitable balanced program for each pupil. If the membership of squads is informal and flexible from one class period to another, the task of planning a program for the individual is rendered more difficult.

The length of time squads participate in their respective activities before they rotate to another activity varies in different situations. The length of time the pupils should spend in one activity before changing to another depends on: (1) the age and school level; (2) the number of times per week the class meets; (3) the length of the class period; (4) the stated purposes of the program; (5) the number of pupils in a squad; (6) the number of squads in a class; (7) the number of activities to be included in a given seasonal program; (8) the facilities and equipment available; (9) the climate (must be considered because it determines the length of the three seasons); and (10) the physical education backgrounds and abilities of the pupils.

The authors have experimented with teaching a modern program of physical education in a small gymnasium and find that even a large class (about one hundred pupils) can be fairly well taught. Under these conditions, it is necessary to exclude activities that include few participants and demand considerable space—for example, regulation basketball. Yet the pupils can experience almost all of the outcomes and use most of the skills of an activity like basketball by modifying the game.

The following diagram is presented to illustrate the utilization of space in a gymnasium and the apportioning of areas to various squads. The same plan is applicable to play areas and fields of limited space.

The plan enables the teacher to move from group to group, thus increasing opportunities for individual instruction. It has been estimated that only 10 per cent of the pupils receive individual attention in the average physical education class.

The Roman numerals in Figure 7 refer to squads occupying

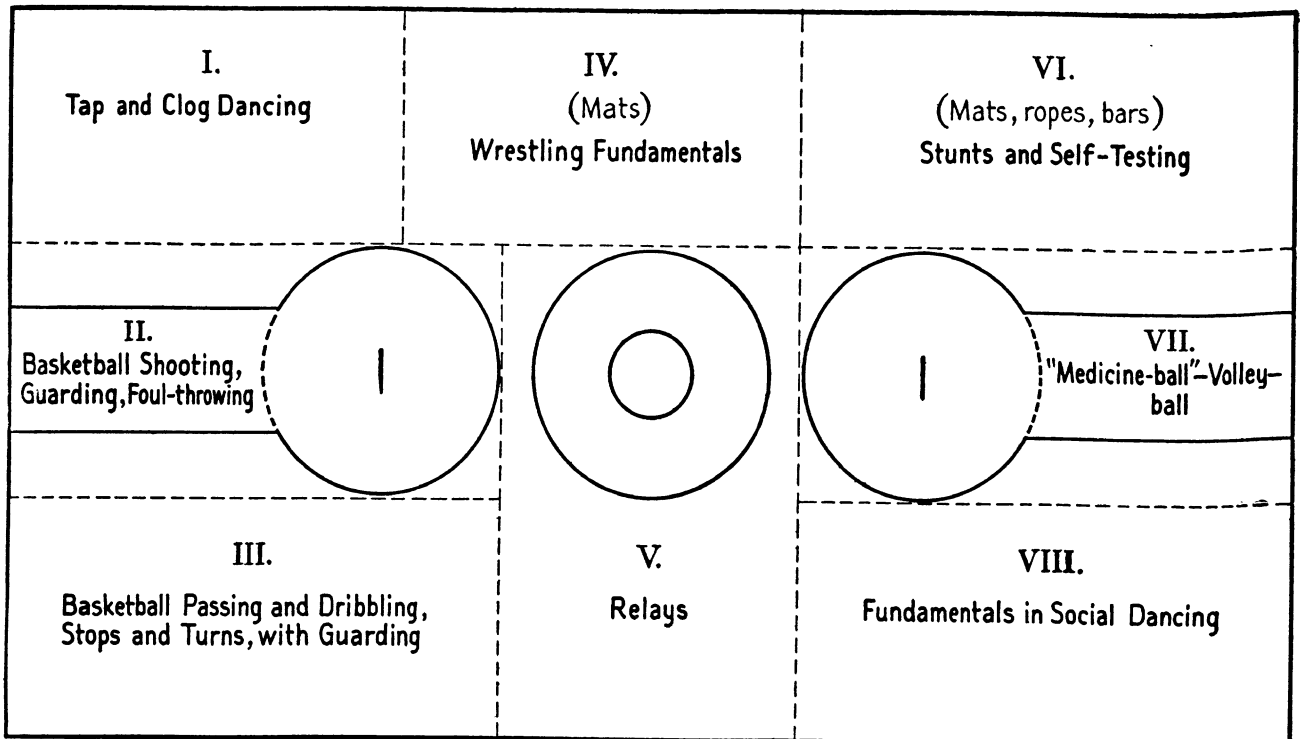


FIGURE 7. PARTIAL INDOOR PROGRAM FOR JUNIOR HIGH SCHOOL BOYS IN A SMALL GYMNASIUM

the various areas. The indicated shape and size of areas are merely illustrative. Assuming twelve pupils per squad, this small gymnasium accommodates ninety-six pupils. Some such plan now is being used effectively by an increasing number of teachers.

It is quite evident that limited facilities and equipment, large classes, and short and infrequent class meetings limit the scope and richness of the program. As indicated previously and as will be stated again, the major task of the teacher in many schools is one of "selling" physical education to the school admistration so that these conditions may be remedied. However, in the meantime it is possible to offer a passable program. Under unsatisfactory conditions the adequacy of the program is quite dependent upon the ingenuity of the teacher. *The inventive teacher changes the rules and content of activities to fit available facilities and equipment.* Without a doubt, some of our former ideas of the activities to be used in a program have been inflexible and dominated by adherence to rule books, texts on games and sports, and traditions.

Most experienced teachers have probably observed a certain type of senior high school teacher at work in a small gymnasium. His winter program consists of dividing the class of sixty into twelve basketball teams. Each team is given a five-minute game with another team while the remaining fifty pupils watch for twenty-five minutes. Basketball coaches, whose objectives of necessity differ from those of the physical educator, are far more efficient in the utilization of space and time. If a teacher's ingenuity is limited to providing a program of this type under such conditions, it would probably be far better for the health of the pupils if he assumed that the only "practical" program would be an entire period of calisthenics for the entire group. The experienced teacher also has seen the unimaginative teacher of the formal type of program, regardless of the size of the gymnasium, divide a

class into three parts to take their turns on the three rings available. Under these circumstances each pupil receives about three minutes of activity. These examples do not present a flattering picture of the ingenuity of teachers of physical education. These examples do not present the work of the average teacher, but they are illustrative of types of programs one may observe in almost any state in the country.

It is conservatively estimated that, at almost any given moment in many a physical education class, only about *50 per cent* of the available space is being utilized. One purpose of assigning given areas of the floor or field to squads is to eliminate this obvious inefficiency. If our present activities make necessary such inefficiency, let us change the activities in those instances where space is limited and additional space is almost impossible to secure for the time being.

Class dismissal. *Just as there is an exact starting time for activities, so must there be an exact stopping time.* Pupils thus are given a schedule upon which they can depend. They know definitely the amount of time available for preparing for the physical education class and going to the next class. *The period should be planned so that activities near the close of the period are less vigorous than those offered during the main part of the period.* These "cooling-down" activities should also be of such a nature that they may be stopped at any time.

The teacher must be unobservedly alert to the time toward the close of the period. Often it is possible to arrange the daily program or the activity so that a new "stage," such as an inning in playground baseball or a different step in a folk dance, is not begun with one or two minutes remaining. Alertness as to time does not mean *obvious* alertness to the clock. Some teachers believe in giving a signal five minutes before the period's end. There are also teachers who maintain that it is better to plan the period so that it closes at such an exciting moment as a tie score, or an unfinished quarter or inning.

These teachers believe that this creates interest and an increased desire for the pupils to return to the physical education class. On the other hand, *consideration should be given to the person who is the next teacher of these pupils.*

Safeguards. A discussion of some of the principles of control related to the organization and conduct of classes should also include at least a brief discussion of safeguards. The present emphasis in physical education upon safety and accident prevention is duplicated in industry, the home, and the street. The attitude in physical education and athletics has become one of questioning the offering of activities that consistently have resulted in many injuries. Activities resulting in forced absences from school and in injuries that handicap or mar the individual for life; that may even result in immediate or related death, are hard to justify. Such an attitude now being adopted by physical educators means that *most of the responsibility for accidents in physical education classes must be assumed by the teacher.* Recognition of this responsibility has made teachers more conscious and alert to the safeguards they should take to prevent some of the needless disregard for human welfare.

Control of environment. One of the first steps in the prevention of accidents is control of the environment, particularly as regards facilities and equipment. The teacher who must conduct physical education classes on a rocky, rough playfield has five major tasks. *First,* to work intelligently, energetically, and continuously for a properly surfaced playfield. *Second,* to select activities or modify the rules and content of activities so that children are not unduly subjected to the hazards of loose stones and rough ground. *Third,* to supervise the activities so as to prevent accidents. *Fourth,* to secure pupil cooperation in preventing accidents and, if necessary, to "stage" periodically a "rock picking party." *Fifth,* to give instruction in the prevention of accidents arising from this type of field and in first aid.

Many a gymnasium is improperly constructed. One still finds as many as eight steel posts placed at intervals on a gymnasium floor as supports to the ceiling or the floor above. More common even in the more modern construction are brick or concrete pillars that at least partially project onto the playing floor. Some gymnasium floors are made of concrete or of cheap wooden flooring that splinters easily after a few years' use. *The teacher should proceed intelligently to secure corrections of these hazards, or a new gymnasium.* In the meantime, he conducts the program in such a way as to avoid accidents.

One definite responsibility in safeguarding the environment is the removal or placement of equipment so that it is not hazardous. Not infrequently, in old gymnasiums one finds chest-weights, stall bars, and other wall apparatus that has not been used for years. If the present program and present pupils' interests do not include such equipment, it should be removed. On both playfield and gymnasium floor *the teacher is ever alert to near-accidents.* He continually studies the placement of equipment in terms of accident prevention, and the allocation of activities on the floor or field with regard to the prevention of accidents.

Safeguarding the pupil as far as equipment is concerned begins with its purchase. No school can afford to buy equipment made of materials of poor quality if the welfare of pupils is considered and if the school faces its responsibility. *No teacher should let a day go by without inspecting equipment for safety.* Ropes wear out; wooden materials weaken, splinter, and crack; cast-iron cracks and breaks; pulleys and iron eyelets wear out; steel crystallizes; and leather and rubber deteriorate. *When equipment is in need of repair or replacement, that need should be reported immediately to the proper official.* The report should be followed up personally by the teacher. If the school cannot afford to repair or replace the hazardous equipment, it should be discarded or its

use limited in such a way that the weakened part is not used.

Pupil responsibility. Modern civilization aims to protect man from accidents, diseases, and hard physical labor. Whether or not this will contribute eventually to man's welfare is not known.

Most of our present-day activities were first invented before the present-day emphasis upon safety. It is interesting to note that almost every vigorous sport has been modified either through rule changes, equipment, content, or instruction, so that it is less hazardous today than it was twenty years ago. Again the point is emphasized that *teachers of physical education should demonstrate leadership in having the courage to modify activities.* When activities are modified to remove needless hazards, there can still be retained many experiences that result in feelings of satisfaction. Is it true that most of the greatest thrills from participating in activities arise from hazardous experiences? Successful achievement in performing feats and skills relatively difficult for the performer and recognized by the social group as worthy of achievement results in satisfaction for most pupils quite as real and significant as a double-flip from a giant swing or "bucking a brick wall." *Proper safety precautions must be arranged by the supervisor of the activities.* Participating in activities that challenge the imagination and ingenuity results in as satisfying feelings to most school children as a thirty-foot dive or tackling head-on a runner twice one's size.

School children like to participate in the hazardous aspects of most activities quite as much to gain social approval as to gain the thrill directly accruing from the feat. "Hair-breadth escapes" are mental and emotional experiences, although the medium through which they are experienced is physical. *Whether or not the pupil experiences "adventure" in physical education is largely dependent upon the teacher's imagination.*

A physical education teacher in one junior high school was observed one day teaching a lesson in which he was attempting

to integrate physical education with geography. Among other activities he took the class for "a hike through an African jungle." The lesson took place in the gymnasium because this junior high school boasted no playfield. The class performed the Tarzan act of swinging across a deep ravine (imaginary) on a grapevine (rope). They carefully walked on a narrow log (two chalk lines drawn across the floor) high above a rushing river (imaginary). They crept through underbrush and over fallen trees (all imaginary). They were alert every moment for "reptiles and wild animals." This "hike" continued for fifteen minutes. If one could judge from outward manifestations the members of this class experienced real and thrilling adventure along with a type of activity which would have been about as adventuresome as Sanskrit if taught by an unimaginative teacher.

We seem to be approaching the day when activities will be more carefully selected, taught, and conducted; when needless hazards that now seem to be inseparable parts of these activities will be removed. Recently, in a western state a teacher taught and conducted a simple stunt so carelessly that a girl was injured. The board of education was successfully sued, with the ultimate result that the entire physical education program was sadly limited. When one teacher's carelessness brings such profound and far-reaching results, is it not time for some self-analysis?

The attitude of "let well enough alone" is another source of accidents. The type of reasoning that makes a person say, "Well, I've had these first graders play every noon in that area right there by high school and nothing's happened yet," hardly can be justified as "reasoning."

If the teacher uses the plan whereby each squad is assigned to a given area on the floor or field, care must be exercised in selecting activities that are to be adjacent to each other. Activities on the mats such as stunts, tumbling, and wrestling, wherein the pupil is "blind" at intervals, should not be placed

next to an activity like basketball, even though it is modified to conform to a small space.

On page 432 the point was made that *it is essential to secure pupil cooperation in safeguarding physical education.* This statement does not mean making the pupils "safety conscious." It does mean gaining pupil interest and cooperation in helping set up routines and regulations and in recognizing and practicing conduct that is conducive to accident prevention. Many accidents that occur in physical education are due to thoughtlessness and carelessness on the part of pupils. It is the duty of the teacher to develop within the members of each class a sense of responsibility for their conduct and a recognition of the types of conduct that result in accidents; in some cases pupils can be given the responsibility for handling cases that refuse to cooperate. Obviously, the "bully," the awkward pupil, the absent-minded pupil, the careless child, and other types represent different problems to the class. Most of these cases must first have their respective attitudes changed. This means that they must clearly understand their responsibility to themselves and to the group. The "dirty" player who intentionally trips a classmate, causing a serious injury, usually changes his attitude thereafter because of his new understanding and feeling about the consequences of his act. It is to be understood that developing pupil responsibility in no sense lessens the responsibility of the teacher for accident prevention.

It takes good teaching to teach to pupils responsibility for accident prevention without making the program seem namby-pamby and without making pupils overcautious and even fearful. By setting the example, the teacher can be too obviously cautious, "safety-minded," and solicitous of those with minor scratches and bumps. On the other hand, the teacher who carefully selects and inspects facilities and equipment, whose program of activities is appropriate to facilities and equipment and appropriate to the group, who

organizes and conducts the program with an eye to accident prevention, and who properly instructs pupils and secures their cooperation ordinarily will experience few accidents in his classes. We want the pupils to be careful by habit and attitude, not by constant attention and continual anxiety and worry.

Managing supplies. *The manner in which balls, bats, nets, and the other physical education supplies are managed relates directly to the organization and conduct of classes.* Confusion and irritation often result if participation is delayed while the teacher, a squad leader, or a selected pupil hurries to the supply room for racquets, nets, or other supplies. Not only is time wasted, but there is an imperceptible, unrecognized feeling on the part of the pupils that is unfavorable to the teacher and to physical education. More mature senior high school pupils, the principal, other teachers, and many parents readily recognize this lack of organization as due to poor planning and poor preparation. The distributing and collecting of supplies must dovetail easily into the remainder of class organization.

Managing supplies also includes anticipating the need for ordering and purchasing of supplies. *The teacher must anticipate making out requisitions* far enough in advance so that they may go through the customary routine; i.e., so that the goods may be ordered and received in time for occasions when they are to be used. Teachers are becoming more adept in "building up" the need for the supplies which they intend to order. They are becoming more alert to the following-up of requisitions and orders so that the articles needed for a certain date are on hand. Teachers are also taking more responsibility for ordering the best materials for the money. This type of ordering necessitates previous investigation, experimentation, and testing of materials. Teachers of physical education are beginning to be more businesslike in returning supplies that do not "hold up," in registering to the proper

persons unemotional, matter-of-fact complaints about inferior goods.

Another factor in managing supplies is their preparation, maintenance, and repair. *Supplies must be ready for use.* Class conduct is influenced unfavorably by poorly inflated balls, for example. Class conduct is affected by the appearance of supplies. One teacher reports that toward the end of the winter season a class became somewhat indifferent to volleyball. Even the squad that had not as yet played the game looked forward to it without much enthusiasm. She tried various means of motivation without results, until one day she gave the class a new ball. The enthusiasm for the game during the remaining periods seemed almost unexplainable to her. Participants like to play with implements that "feel right" and "look right." The indifferent teacher does not bother to mend nets, deflate balls at the end of the day and inflate them before classes begin, keep leather goods clean with harness soap, and perform such simple repairs as sewing the seams of a playground baseball with a harness needle and waxed thread. Even in schools that boast of liberal budgets, there is no need of discarding some of the supplies that are ofttimes condemned as "worn out."

Supplies should be stored in an orderly manner. Supplies being used in a given season should be placed where they are easily issued and returned. Those not being used during a given season should be prepared for storage, placed in storage, and periodically inspected. *Stored supplies should be periodically inspected* because the teacher usually has to do some experimentation to find the best ways of preserving certain supplies. Humidity, temperature, and ventilation in storage rooms must be regulated to preserve best different types of goods. Various preparations placed as preservatives on supplies-to-be-stored need to be applied in proper amounts. The methods of cleaning supplies before they are stored is also a factor in their preservation. Usually the most authen-

tic information for cleaning and preparing goods for storage can be secured from the companies that manufacture the goods. The point of emphasis here is not only the matter of economy. It is that supplies should be so maintained that they will have favorable effects upon class organization and conduct. Some schools paint numbers on each article with India ink in order to check on its wearing qualities. This plan is particularly valuable if several articles—for example, volleyballs—are purchased from different manufacturers.

The daily program. The organization and conduct of classes is also influenced by the program offered. *Many teachers who have found it necessary to exercise considerable "discipline" during the class period discover that a more careful planning and arranging of the program eliminates many disciplinary problems.* How is this done?

In the first place, *at least part of the program content should be related to activities used by pupils in out-of-school hours, days, and months.* In the second place, the *daily program should include some new and appropriately challenging game, stunt, relay, or other activity.* In the third place, *the daily program should be arranged so that there is an appropriate balance between instruction, drill, recreation, practice, and review.* Some experienced teachers believe the physical education period should be devoted entirely to instruction. It is believed by these teachers that pupils will participate in those activities, in which they have been instructed, during after-school hours, week-ends, and vacation periods. The argument is that, since they will do so, the physical education period should consist exclusively of instruction.

This point of view is not held by certain other experienced teachers. The reasons for their opposition to the plan are:

1. Many American children live in rural communities, attend consolidated schools, leave school on buses as soon as school is over, have responsibilities around the farm or in the home as soon as they reach home, and are kept rather busy on week-ends and during vacation periods.

2. As the broader meaning of "vitalized teaching" is appreciated and practiced, teachers want their pupils to experience the satisfaction of actual participation in games and sports as well as receive instruction and practice in such activities. In music, for example, the pupils not only are instructed in *how* to sing and practice their respective parts as instructed, but they also are permitted to sing for the pure enjoyment of singing. In industrial arts, pupils are instructed in the use of tools with reference to materials and thus are improved in skills, but are granted the satisfaction of constructing articles they want to make. We see this same emphasis appearing in the teaching of certain other subjects such as English and the foreign languages.

3. Most of the teachers who believe in the "100 per cent instruction during the physical education period" devote the period to instruction in the skills of an activity. There is considerable evidence to indicate that some activities are better learned by "wholes," with instruction being given concurrently. By "better learned" is meant not only that the learning is more meaningful, more effective, but more permanent.

4. *Teachers should be interested not only in the psychology of learning, but also in the welfare of children.* If it is possible to teach physical education so that the child experiences some of the claimed benefits of actual participation in activities during school hours and at the same time learns these activities, is this not better teaching? Should feelings and satisfactions that accompany participation in games and sports be postponed to out-of-school hours?

In the fourth place, *the program should be arranged so that there is an appropriate balance between activity and relaxation.* There are those who maintain that the pupil should be kept constantly active during the physical education class. Certainly the traditional academic teacher would expect a physical education period to be devoted to nothing but activity. It seems, however, that this is an age of high-compression motors and high-pressure living. A glance at the extracurricular activities program of the average school convinces one that even at school there is little respite. Jacobson believes that we do not know how to relax.[3] What other area in the

[3] Jacobson, Edmund, *Progressive Relaxation.* Chicago: University of Chicago Press, 1929.

school curriculum is going to teach the pupil to relax or offer the opportunity to let him try it?

The time allotted to physical education is all too short. In fact, it is grossly inadequate. But on the other hand, is not the welfare of the individual the basic consideration? Is "100 per cent activity during the physical education period" the only contribution physical educators have to make? No point is being made for devoting any considerable amount of time during the class period to rest and relaxation. Nor is it being proposed that every period include several minutes of rest and relaxation for normal pupils. Rather, it is being suggested that learning how to relax includes mental, emotional, and physical controls, just as participation in motor activities includes these controls.

Some branches of the armed services during World War II offered programs of relaxation based on one or more books on the subject. This large-scale application is partially responsible for present public interest in and practice of various exercises designed to induce relaxation. The skills of relaxation, like other skills, are more easily learned in childhood under the guidance of a trained teacher. There are physical educators who maintain that physical education deals only with motor activities—and vigorous ones at that. And yet many a famous coach of athletics finds it necessary and worth while to teach his players how to relax. In fact, many of them utilize every possible technique and circumstance to facilitate relaxation. Some boys are given special instruction and receive more opportunities for relaxation than others. Is this a phase of athletics? Is this part of the responsibility of the coach? Has the experience of veteran coaches indicated that this is a worth-while process? The coach believes in relaxation for certain purposes that may not parallel those of the physical educator, but there it is—relaxation, a part of athletics. Has it a place in physical education? [4]

[4] Nash, J. B., "Has Education The Answer?" *Journal of Health and Physical Education*, October, 1939, Vol. X, No. 8, pages 443–445, 492, 493.

In the fifth place, *the daily program must be carefully planned in terms of the child's past experiences in physical education and those that are to come.* This means the daily program includes some review, some attack upon the new. Familiar activities are participated in, and new ones introduced at appropriate times. Occasional participation in an "old" activity lends a certain type of stability to the program and brings a certain feeling of security to the pupil. Lead-up activities gradually prepare the pupil for the future and add the challenge and novelty referred to above.

Sixth, *the daily program should be planned throughout the year so that it gradually progresses in difficulty of skills, in objectives, in accordance with pupils' interests and needs, and other such criteria of program progress and pupil development.* Seventh, *the daily program should also demonstrate that the teacher uses a general plan* rather than a pre-arranged, detailed set of activities that "must be covered."

The teacher. It may seem anomalous to consider "the teacher" as a separate factor in the better organization and conduct of classes. After all, is not most of the material discussed in the previous and present chapters about and for the teacher? The purpose of this paragraph, however, is to point out a few factors related to the teacher that are often overlooked or forgotten and not specifically emphasized heretofore in connection with class organization.

Class organization and conduct are dependent in part upon the teacher's voice and speech. Rate of speech, enunciation, pronunciation, pitch, volume, and inflection all are partial determinants of the way a class responds. The teacher who speaks very rapidly in a shrill, high-pitched voice is usually a nervous type, or gives that impression. Such stimuli defeat the teacher's efforts to demonstrate stability and poise and to engender such traits within the members of the class. Many disciplinary cases can be traced to this "unimportant" factor.

Many young teachers do not make themselves heard. The resulting confusion and irritation on the part of the pupils

tends to put the young teacher on the defensive. He then makes the mistake of displaying his impatience, shouts at the children, or becomes sarcastic. Some disciplinary problems arise simply because the pupils do not hear or understand what the teacher has said.

The teacher's manner is another factor that facilitates or obstructs good class organization and conduct. The teacher who "walks up and down" in front of a class as he speaks tends to give the impression of nervousness, lack of stability and poise. Then there is the teacher who displays lack of confidence by assuming an unnatural dignity. Sometimes this becomes so extreme that it becomes arrogant and domineering. At the other extreme is the teacher who assumes a "meek as a mouse" manner. Then there is the teacher whose movements in demonstrating skills and in moving around the floor or field lack decisiveness. He gives the impression of not knowing for sure what he is going to do next. Furthermore, some teachers, by the manner which they assume, give the impression that they do not know what the class is to do next. Teachers have been observed who actually permit themselves to look panicky when a rather simple decision is to be made or when slight modifications in plans suddenly are to be made.

Some of the traits particularly pertinent to class organization are: appearance, carefulness, dependability, forcefulness, promptness, and self-control. *The teacher must be alert and look alert.* He must not only know what is going on; he must also look as if he knew. This characteristic tends to keep the class "on its toes"; it helps to set the tempo and atmosphere of the class. Furthermore, the teacher who is alert *anticipates* the need for minor regulations and rules, and the need for changes in attitudes in order to improve class organization and conduct.

The requirement of physical education. Before discussing the importance of absences and excuses as a factor in class organization and conduct, it seems advisable to consider for

a moment the requirement of physical education in schools. If physical education were on a voluntary basis, no records of absences and excuses would be necessary.

Within recent years two or three of the larger universities have placed physical education on a voluntary basis. The reasons for this action usually arise from a change in the policy of the institution's administration toward requirements in general. This change in policy is based upon the assumption that students should be coddled less, given greater freedom in and more opportunities for making decisions, for taking responsibility of self-direction, for self-development.

There is no question that physical education as now conducted in some colleges and universities is difficult to justify as a requirement. The difficulty is that voluntary physical education is based upon several assumptions not easy to justify or prove. A few of these assumptions are:

1. Students entering the institution have received such excellent public school backgrounds in physical education that they possess recreational skills and participate in beneficial kinds, amounts, and intensities of activity. They already have acquired the proper knowledge of and attitudes toward physical education that will stimulate them to participate now and later on.
2. Students who dislike physical education will voluntarily participate often enough and in such a manner as to receive benefit from their activity.
3. Students who possess such physical defects as cardiac disturbances of a structural type and who like physical education will participate in only beneficial amounts and intensities.
4. Students who do not choose to participate at all do not need physical education.
5. Students are fully prepared to be self-directive in deciding whether or not they will participate in physical education; if they decide in the affirmative, they are fully prepared to select their own programs of activities; if these selected programs are harmful or fatal to the individual, the institution is in no way responsible.
6. It is wiser to place physical education on a voluntary basis than to change the present program.

Regardless of the future of physical education in the colleges, school administrators, who often come to closer grips with present socio-economic problems in the workaday world than do some college administrators, are keenly aware of the need for adequate preparation in recreational skills. School administrators are increasingly appreciative of the relationship between normal growth and development on the one hand and physical activity on the other hand. They also are beginning to recognize the vital nature of physical education as a field with which certain other school subjects can be integrated.

Further progress is seen in new and revised state legislation for physical education in the schools. More schools are accepting or requiring credit in physical education for graduation from high school. For that matter, there is an increase in the number of colleges and universities counting physical education credit as one of the fifteen or sixteen units accepted for entrance.[5] In some states according to legislation, physical education has become one of the subjects which *must* be taught in all high schools.

School attendance. *Control of education is under state jurisdiction as provided in the National Constitution.* The various states differ in the kinds and amounts of education required and the limits of "school age." One fundamental American belief is that education shall be provided for every child. Americans believe in the benefits to be derived from education, in spite of some discouraging results. Spending a given number of years in school is a state requirement. This statement means that the state must provide certain promoting, supporting, improving, and enforcing agencies.

State financial support of education in school districts is partially based upon attendance. This fact makes it necessary for the local school district to keep accurate records of

[5] Meredith, William F., *Regulations Concerning the Acceptance of Health and Physical Education for College Entrance Credit,* pages 193–194. Norwalk, Ohio: The Law Abstracts Co., 1933.

attendance, to take steps to promote attendance, and to prevent needless or preventable absence. Some parents and many pupils are not qualified to decide the merits of mandatory school attendance. One step taken by the school to eliminate needless absence is the construction of regulations regarding absences. One of these regulations is that the absentee must present an excuse for his absence.

Absences. With these preliminary remarks we are prepared to discuss certain provisions for taking care of absences and excuses that facilitate class organization. *Careful attendance records must be kept by the teacher to make sure that each pupil who attends school also meets his scheduled classes.* No vivid imagination is needed to visualize what would happen in the conventional-type school if class attendance were voluntary.

If the teacher did not know whether the size of the next class would be six or sixty, planning and preparation for the class would be extremely difficult. Each day, valuable class time would have to be spent organizing the class and deciding on the daily program. Furthermore, the teacher would not know until the class assembled whether the pupils had been present at the previous class or one a month earlier. The class would probably be a mixture of those who had received previous instruction and practice in the activities and those who had received no instruction whatsoever.

Keeping records of attendance is one way of reminding the pupil that his obligation is to report to class. It is a routine which he soon learns to accept without question. And it is not unrelated to life in the workaday world wherein most of us must report for work at specified times. Learning to conform to regulations that are necessary for the "common good" is one way pupils develop, one way they can demonstrate cooperation, one way of meeting obligations and showing a sense of responsibility.

Some schools overemphasize "perfect attendance." It

would be difficult to estimate the degree of the spread of communicable diseases such as the common cold in schools due to perfect attendance becoming a fetish. In some localities the idea becomes so widespread that parents literally force their children, although they have obviously symptoms of illnesses, to go to school. Why? Merely to keep up a perfect attendance record for the year and receive a seven-cent certificate in recognition of this achievement!

The daily health inspection provides a tool for either sending pupils with symptoms of illness to the school nurse or the principal's sending them home if no nurse is provided. Failure to give classroom teachers some instruction in the recognition of illness (not in diagnosis) renders the daily health inspection less effectual. *Elimination of a pupil who is in the first stage of an illness safeguards the child, protects the remainder of the class, and often facilitates class organization.* A sick child usually fails to respond in a normal manner. He may be irritable, obstinate, "dopey," or indifferent. One such "nonconformist" is sufficient to upset the normal behavior of the class. The teacher should attempt to find out why a pupil is unruly quite as much as he attempts to encourage the pupil to cooperate. Of course, some teachers still believe in immediately applying disciplinary measures to any pupil who fails to conform to rules, codes, and regulations, regardless of the reason. In fact, such a teacher seldom discovers the reasons because he interprets his major task as "keeping school."

Excuses. *The teacher should visibly demonstrate a business-like attitude toward recording excused absences.* Slipshod practices on the part of the teacher are immediately reflected in the attitudes and behavior of the pupils. Occasionally one finds a teacher of physical education, who wants to be considered a "good fellow," giving the impression to pupils that he disapproves of "all this red tape."

When an absentee returns to school after an illness, he

should follow out the regulation of the school for readmittance to classes. This form may be a written notice from the principal's office, the written excuse from home okayed by the principal, the family doctor's statement, a notice from the school's health service, or simply the excuse from the home. The teacher is interested in the excuse for illness not only as a matter of record but also as a reminder that the activity of the pupil should, perhaps, be curtailed for a few days subsequent to his return.

Excuses for athletic participation. A good many high schools still make a practice of excusing from physical education classes boys turning out for athletic teams. The school may recognize such excuses, but the organization of classes is none the less disturbed. The classes affected must be reorganized after boys are excused to participate in a sport. At the close of the fall and winter sports season, further reorganization is necessary to take care of boys returning from a season of participation.

The conduct of pupils also is apt to be affected. Some pupils resent seeing the athletes being excused from physical education classes. Some athletes returning from a season of sport assume a superior attitude toward the program and the nonathletes participating in it. Unless the physical education program is made to synchronize with the sports seasons, the returning athletes may have difficulty in participating in activities without having had the previous instruction and practice.

Some schools do not require that athletes return to physical education classes after the close of the season. Other schools go so far as to excuse any boy from all physical education who is to turn out for athletics at any time during the semester. Either of these plans contributes to the idea of an athletic aristocracy and permits an athlete to graduate from high school with skills and knowledges in but one or two activities and with unfavorable attitudes toward any but the major

sports. It is believed by an increasing number of teachers and coaches that athletes should report to physical education classes like any other pupil. The practice of permitting athletes to go through school without having learned to play sports such as volleyball, tennis and golf, is questionable. One is highly skeptical that thirty minutes of activity in a physical education class one, two, three, or even five times a week seriously interferes with a boy's performance during sport practices and contests or is too much of an activity load. Some schools sponsor interschool athletics for girls. The discussion above applies to girls' interscholastic athletics as well as to the boys' athletic program.

Excuses during menstrual periods. This brings us to the discussion of the problem of periodic excuses for girls during their menstrual periods. As in the case of other excuses, there is no commonly accepted practice. Some schools handle the problem by having all girls during this period report to the study hall, homeroom, or library. Usually a note, signed by the school nurse or woman teacher of physical education, is given to the girl, granting permission to report to one of these three rooms. Other schools require that the girl report to the physical education class in street clothes, spending the class period observing the classwork. A great many schools follow the practice of having the girl participate in activities of low intensity, such as archery, quoits, and shuffleboard; or participate lightly in the work of the class; or report with the class in adaptive physical education. The girl also may intersperse such light activity with observing the work of the class.

The condition and reaction of girls during the menstrual period is individualistic. The teacher of physical education should avoid an oversympathetic attitude and practice, quite as much as she avoids being "hard-boiled." Nor can she assume that her own experience is any criterion for the girls in her classes. It is doubted if any regulation, whereby all

girls are treated similarly, is the best practice. The problem calls for good judgment on the part of a well-trained teacher. This statement assumes cooperation with the school nurse. In the case of a teacher who is not well trained in a school providing no school nurse, the family physician should be consulted. In general, the best teachers "play safe" by seeing that girls who apparently can carry on a normal load of activity receive a somewhat less intensive program during this period and by being careful not to force into activity girls who seem to react unfavorably either in attitude or physiological functioning.[6]

It is obvious from this discussion that the basic plan of class organization in girls' classes in the junior and senior high school should be somewhat more flexible than that of boys. For example, the size of squads should be larger so that the squad's participation is not impaired because of the temporary absence of two or three girls. Or, as is done in some cases, squads are not formed for the daily program until after roll is taken. Some teachers maintain an extra squad in their classes. The members of this squad are made up of good performers and fill in for absentees. The extra squad sometimes consists of pupils who have made application for the squad leaders' club. These same two plans for assuring full squads for each class meeting are also used sometimes in boys' classes.

Unjustifiable doctor's excuses. Long ago, some physical educators learned to work cooperatively with the Doctor of Medicine. Lack of such cooperation, when it exists, is usually due to one of two reasons: (1) the teacher of physical education has not been properly trained, or (2) the physical educator has not properly familiarized the physician with the purposes of modern physical education. Many doctors today

[6] Lee, Mabel, *The Conduct of Physical Education,* pages 334–336. New York: A. S. Barnes and Company, 1937.

need not be convinced. Their experiences during World War II and the results of Physical Medicine have changed their attitudes.

Some teachers of physical education still have difficulties securing cooperation from representatives of the medical profession in their respective localities in the matter of excusing pupils from taking physical education. These teachers believe they have sufficient evidence to justify the statement that some family doctors give excuses as a matter of friendly cooperation with members of their clienteles. For example, a pupil protests against taking physical education. If this child's parents are uninformed or misinformed as to the purposes and program of modern physical education, they agree with their offspring's attitude. The family physician is asked, on the basis of friendship, to issue a statement that the child should be excused from taking physical education.

The acceptance of excuses for a child's refraining from entering into any part of the school's regular program is a problem for the school administration to solve. There is an increasing tendency for schools to honor the type of excuse outlined in the above paragraph only if the school physician concurs with the family physician's judgment. At first, many a school physician timidly agreed with the verdict of the family doctor. Today this attitude and practice have largely disappeared as the duties and responsibilities of the school physician have been more clearly developed and defined.

There are two steps the physical educator can take in decreasing the number of family doctor's excuses which are judged to be unjustifiable. *First,* by making the physical education program more appealing. Many teachers report that this step alone is sufficient to eliminate 90 per cent of the requests for such excuses. Here is a typical statement:

In the _____ Junior High School (of 625 pupils) in September we had 150 pupils with permanent excuses from taking physi-

cal education signed by the family physicians. I was new on the job and immediately protested to the principal. This gentleman asked me what I expected him to do in the face of years of this practice. He told me that many children and parents in this town had never liked physical education. This gave me a tip. I found out what all the boys and girls liked to play. Well, those who did not like "phys. ed." did like games such as table-tennis, archery, and clock golf. I recognized that these activities were not very vigorous but figured that if we could attract pupils into physical education classes with the activities they liked, we could gradually get them into others. Well, we got some financial help from the P.T.A. for the purchase of the equipment and made up the rest by running a couple of candy sales. Today (April of the same school year) all of the 150 "excused" pupils, except two, are reporting regularly to their physical education classes. And, we have already gotten eighty-four of them into other activities.

Second, the physical educator can secure the principal's permission to print or mimeograph a form which is to be filled in by the family physician for all cases which he believes should be excused from taking physical education. There are several modifications of the form, all of which have been successful in eliminating the unjustifiable doctor's excuse. One form reads: "In my professional opinion ..... should be excused from taking physical education." A more definite form reads: "In my professional opinion ..... should not engage in the activities checked." On this form appear various activities of vigorous and nonvigorous types which are or may be included in the physical education program. A still more drastic form reads: "In my professional opinion ..... should not participate in any physical activity whatsoever at any time."

The conduct of pupils is affected by the indiscriminate issuing of the family doctor's unjustifiable excuse. Some pupils believe that physical education is not regarded highly by the doctors, by the school, or by the parents. Many of them know that continual complaining on their part will secure a

doctor's excuse for them. If such attitudes exist, it is not difficult to imagine the initial difficulties in class organization confronting the new teacher.

Justifiable doctor's excuses. Probably the majority of excuses from regular physical education, issued by family physicians over the country, are valid and justifiable. Most excused pupils, however, would receive benefits from participation in an adaptive or corrective-restrictive-modified program. *Assigning pupils to the adaptive program is the responsibility of those in charge of the school health service.* In the absence of this service, the teacher consults the family physician as to types of activities judged beneficial by him.

There is a decided emphasis today upon conducting the adaptive program according to principles of mental hygiene. Children in the adaptive program are not made to feel they are different. In fact, there is a tendency to have these pupils report to the regular physical education period with the remainder of their respective classes. The squad system, with space apportioned to the activity of each squad, enables the teacher to supervise and instruct the "adaptives" at the same time as the other squads. This plan also enables proper attitudes to be developed on the part of the "normals" toward their less fortunate classmates and vice versa. Those pupils with marked deformities who have been made or permitted to develop sensitiveness about their handicaps usually can be *gradually* educated to be considerably less sensitive. At first special arrangements about costume, location of locker, and taking a shower may be necessary. One teacher reports that at first he had some of the adaptives distribute and collect the equipment and supplies, thus making it possible for them to report to the locker room for dressing and bathing. A little later on, occasions were provided for them to be in the locker room and participate in the "socialization" that takes place there. This teacher reports that even the most sensitive in-

dividuals requested or were willing to dress and shower with the remainder of the class within a five-month period.

Adaptive classes, taught separately, are much easier to conduct than the plan mentioned above. The "separate group" plan enables the teacher to supervise and instruct more carefully. Each individual also may receive more individual attention. Many regular physical education classes are so large that the teacher finds it impossible to give the added alertness and attention to the adaptives if they join the remainder of the class. Furthermore, some teachers find it impossible to spend the time necessary to help these pupils overcome sensitiveness.

Way that the rules of mental hygiene are practiced. The pupil is given encouragement, is made aware of progress, is made conscious of and practices those activities in which he can participate now as well as those he may participate in as he improves. Today the teacher knows that his time and thought must be spent upon the development of proper attitudes on the part of pupils in the adaptive program quite as much as upon exercises. The child with an irremediable defect is made to appreciate the activities in which he can and may be able to participate. Everything possible is done to assist him to live usefully and happily within his limitations. The pupil with a remediable defect seldom corrects the condition unless a strong consistent desire is created.

"Making up" absences. Some physical educators believe that absences from physical education cannot be "made up." These teachers believe that a pupil absent for sixteen class meetings, who then participates intensively several hours a day upon his return to school until the sixteen hours are made up, has not made up anything but the hours; in fact, such a procedure may injure his health.

A good many physical educators believe absences should be made up. The usual practice permits the returning pupil a

period of two weeks after his absence for make-ups, except in postoperative and severe illness cases. Some teachers believe the unexcused absences should be made up hour for hour, in addition to the satisfactory attainment of the skills covered by the class during the pupil's absence. Many teachers are not so strict if the absences are excused. Either substitute work is permitted or the attainment of the skills missed is required.

The practice of reserving for make-ups the last week or two before grade reports are issued and permitting pupils to make up any number of "cuts" is questionable. In some schools cuts throughout an entire semester are permitted, and then the pupils make up the absences in three or four days. Sometimes the physical education department, in an effort to discourage this practice, rules that unexcused absences can be made up only by "running around the track." This practice results in forcing students, who have had very little physical activity for months, to run for hours. One department carries the rule a step farther. A given number of laps per hour is required. An instructor sits by the side of the track with a stop watch to time these runners. If a student runs a lap too slowly, that lap is eliminated in the final count. The student then has so many "extra" laps to run.

Class organization is affected favorably in most situations by requiring make-up of missed work. This requirement develops in the pupil a sense of responsibility, an appreciation of his obligations. If the make-up includes the attainment of skills covered during an absence, the work of the class is facilitated because it tends to insure that all pupils have had the same amount of instruction and practice. In addition, the pupil is impressed with the fact that physical education, like other school subjects, demands certain acquirements. Some teachers do not permit individuals who are making up back work to attend their regular classes until the work is made up, because of the effect upon class organization and

conduct. Other teachers maintain that to bar the returning absentee from class puts him that much farther behind. Still other teachers permit them to attend class but do not allow them to participate. If the practice used by teachers in other fields is followed, the returning absentee is permitted to attend class and to participate, while his missed activity is concurrently made up at some other hour. Teachers using this plan make it a point to cause the pupil to experience "felt difficulties" and the need for the work missed.

In consolidated districts where almost all pupils leave immediately after school, the solution of the make-up problem is rendered very difficult. Then there is the question of the teacher's time. It is believed that relatively few physical educators have sufficient free time to devote to instruction in and supervision of make-up work. The plan of using study hours for make-ups in physical education is not looked upon with favor by many physical educators because they fully appreciate that the pupil needs this time to make up his other schoolwork. Other teachers believe that academic work can be made up at home more easily than can physical education work. They permit the pupil to come to any physical education class that happens to be held during that pupil's study hour.

Still other teachers claim that this latter practice interferes with the organization and conduct of the class into which the make-up pupil comes. These teachers assign before-school and noon hours as the make-up period. Then there are teachers who leave the responsibility of making up the work strictly to the pupil, offering to help if a time is selected when they are free. In some states teachers are given a free period in the school day and, if the facilities are not used by other classes, may help the make-up pupil at this time, if the pupil is free to come.

The entire problem is complicated and it has not been solved satisfactorily in most situations. The wide variety of

local practices and regulations forbid any one "best" solution. In fact, some teachers find it literally impossible to require making up absences in their present situations, a predicament which often results in unfavorable effects upon class organization and conduct.

One of the emphases made in most of the training programs of the armed services during World War II was efficiency in management and organization of "physical-training" classes so that maximum time could be devoted to participation. Even in classes where the "physical-training" period included passing to and from other classes, dressing and showering, it was not unusual for thirty-five minutes out of the hour to be spent in physical activity. Superior management and organization resulted in thirty-nine minutes for participation. True, time was of the essence in those days; yet, when teachers of physical education complain about insufficient time for their work and manage to provide only approximately twenty-five minutes out of the hour for participation, one can but wonder. *Time*, a fundamental in accomplishing the objectives of physical education, *is of the essence!*

SAMPLE TEST ITEMS

True-False

1. The existence of a principle of teaching automatically takes care of the matter to which the principle refers.
2. Ideas held by persons who lived in the Middle Ages influence the thinking of school men today regarding physical education.
3. Interscholastic athletic programs have helped provide facilities and equipment for physical education.
4. The one legitimate excuse for a very poor program of physical education is a lack of facilities and equipment.
5. "Markings" on the field and floor aid in class organization.
6. On a baseball field, a straight line running from home plate through second base should run in an easterly-westerly direction.
7. Unslaked lime is best for marking the playfields used by small children.
8. Rows of lockers should always be placed at right angles to the outside walls of the locker room.

9. The best way to have a physical education class assemble at the beginning of the period is the "class front."

10. The chief criterion of roll-taking is that it be easy for the teacher to do.

11. All members of a physical education class should take the same activity at the same time.

12. Every square foot of floor space in a gymnasium should be utilized every moment in a physical education period.

13. Accident prevention in physical education classes is more the responsibility of the teacher than any other one person.

14. Physical education activities must be hazardous to be adventuresome.

15. Children should be made safety conscious.

16. A teacher should never complain if the supplies for physical education prove to be defective; rather, he should simply not purchase any further supplies from that company.

17. The physical education period should be devoted exclusively to instruction.

18. The physical education period should be devoted exclusively to activity.

19. Teachers of physical education should teach children how to relax and provide opportunities for them to relax.

20. Every possible fact supports the contention that physical education should be required of all pupils in schools and students in colleges.

Multiple Choice

1. Absences from physical education class need to be recorded and reported because:
   - *a.* Physical educators believe physical education should be required.
   - *b.* Some state financial support is based upon attendance.
   - *c.* Children need to learn to meet their responsibilities.
   - *d.* The school administrator says so.
2. A child who seems to be ill:
   - *a.* Should be given some medicine by the physical educator for the ailment which the latter thinks he has.
   - *b.* Often interferes with class organization and conduct.
   - *c.* Should be kept in school if he wishes to stay.
   - *d.* Should be sent to the nurse, school physician, or school principal.

3. Excusing members of athletic teams from physical education classes:
   a. Cannot be justified educationally.
   b. Disrupts class organization.
   c. Is a sign of misplaced emphasis.
   d. Is justifiable physiologically.

4. It is a fact that physicians give excuses indiscriminately because:
   a. They dislike teachers of physical education.
   b. They doubt the physical educator's judgment.
   c. They often do not understand the modern purpose of physical education.
   d. They can make some additional money.

5. Children with obvious and serious defects:
   a. Should never take any form of physical education.
   b. Should always take physical education in a class with others with physical defects and deficiencies.
   c. Should always take physical education with the "normals."
   d. Should be given verbal pity and sympathy.

6. In making up absences from the physical education class:
   a. Making up the skills is more important than making up the time.
   b. The pupil should be worked longer and harder than usual.
   c. The pupil should be excused from making up every hour missed.
   d. The teacher should make the child do some work which the child dislikes.

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18.

Principles of Motivation

DO CHILDREN really want to learn; or are they forced to learn by the constraints of society? Perhaps there are many activities which they would prefer to those of the school situation. If so, is it necessary to change their preferences? Surely they will attack more avidly that which they want to learn. Can one go so far as to assume that, if other factors are held constant, the rate of learning is proportional to the motivation of the learner? If this hypothesis is true, the teacher should stimulate strong motives in the student. How are motives stimulated? How does the teacher arouse, for example, the "wholehearted purposeful activity, self-directing and self-propelling" of Kilpatrick's projects?

Woodworth has said: [1]

> We act as we have learned to act, see what we have learned to see, are interested in what we have learned to be interested in, enjoy what we have learned to enjoy, and dislike what or whom we have learned to dislike.

If the student must learn to like, to enjoy, to be interested in people, things, and situations of life, how can the teacher expect interest before or even accompanying early stages of learning? Must the student be made to work until he learns to be interested? Must the teacher coerce the student during

[1] Reprinted from Woodworth, R. S., *Dynamic Psychology*, by permission of Columbia University Press.

the primary stages of new learning activity? How can the teacher best induce the student to go through the necessary activities for learning? What incentives can he bring to bear?

Incentives are stimuli acting from outside the individual. They may come from persons, objects, or situations. They are environmental conditions so arranged that they stimulate desired student responses. The teacher is a vital part of this stimulating environment. He must not become so dominant a part of the environment that he carries on most of the activity. Instead, he must remain the instigator of *student* activity. *He attempts to focus the energy drives of the students on the learning experiences by use of incentives which promise satisfactions and pleasurable activities.* When he can achieve such focus of student energy, he finds the need for imposed control and restraint reduced to a minimum.

Utilizing natural activity. Activity is a characteristic of normal individuals. In fact, normal children find it annoying to "sit still and keep quiet" for even relatively short periods of time. Learning, itself, implies activity on the part of the learner. But undirected and random expenditure of energy may be very uneconomical as a learning procedure. When the natural activity of the healthy student is guided by the mature and understanding adult, learning is accelerated. Guidance is more profitable when the teacher understands the student's wants. For example, more and more women teachers are using "personal appearance" as a basic incentive in physical education classes in junior and senior high school. The teacher attempts to direct the learner's activities by environmental and personal suggestions, and by helpful constraint.

Focusing drives. Every individual possesses organic, visceral, and muscular tensions, and disequilibria. These tensions are catalogued variously as dissatisfactions, drives, urges, and wants. The individual is considered unmotivated

until he becomes oriented toward patterns of satisfying these tensions. When the individual incorporates certain patterns of activity into a particular tension field, he is said to have acquired a *motive.* His wants now have direction. Certain external stimuli now orient the activity energy of the particular drive.

Guidance toward new motives. The teacher undertakes to identify new experiences with wants and motives that are already a part of the student. He attempts to show the student that certain satisfactions, successes, or relief from wants can be attained through the new learning experiences. *Guiding student energy into acquirement of new motives, broader motives, and ideated motives (purposes) is a major job of the teacher.*

Related educational theories. Various theories of education are based on this principle of energy guidance. Leading "from the known to the unknown" as a teaching principle implies the attaching of motives of former experiences to the new experiences. The cues from the new experiences have, supposedly, enough in common with the former motive patterns to tap the energy supplies and utilize them in the new learning. The "psychological rather than the logical approach" theory is based on this principle of starting with bits of experience which are already a part of the individual's motivation patterns. With this identity established, related material or activity is more quickly incorporated into that motivation field. The student of education will recall Herbart's "apperception" in this connection.

Definition of terms. The terms *drive, motive, interest,* and *purpose* are used with such varied meanings in educational writings that definition, for the purpose of this chapter, seems advisable. *Drive* will be used to mean physiological tension or state of disequilibrium. Such drives are usually internal, are probably natively aroused, and produce persistent mass activity. When the energy from these tensions becomes

oriented by learning into patterns of behavior directed specifically toward or away from persons, situations, or objects, the term *motive* will be applied. In motives the general diffuse activity of the drive is modified by learning.[2] When the motive is recognized by the individual, and the end-result ideated in symbols, it will be called a *purpose.* It should be noted that a purpose may be definitely formulated in the individual's thinking even though the specific means of attaining the purpose are not yet clear. The reader will readily see that *interests,* as commonly used, is a word implying that the particular activities which are interesting are identified with the individual's motives or purposes.

It is common practice to speak of motivating and interesting students. Actually the teacher applies incentives toward activity which may broaden out motives already present in the individual; or which may point toward specific behavior patterns, patterns which satisfy some inner drive and thereby reduce the tension or disequilibrium. A motive consists of inner drive plus directional action patterns. The orientation of the drive toward certain specific action patterns has to be learned. It is a development, a kind of growth.

Interests are those activities which are felt to be valuable to the individual having them because of their use in satisfying drives. The word, *interest,* used in the sense of "having an interest" in an activity, merely implies the feeling accompanying the orientation toward that activity. Interest, according to this meaning, is also a development.

According to the above interpretations, it would not be correct to say that the teacher motivates or interests the student. Such a statement would be analogous to saying that the teacher grows the student. When the words "motivate" and "interest" are used to refer to the teacher's employment of devices and incentives to stimulate the pupil, one should interpret the

[2] This learning may increase the range of stimuli, or modify the response, or both.

terms to mean something analogous to "culture," "cultivate," or "foster."

Basis of drive. The original source of human energy is food. Food is transformed by the body's metabolism into various elements and into energy. The neural, circulatory, and endocrine systems of the body distribute the energy throughout the body and function in maintaining a state of relative equilibrium or chemical balance. Need for food will upset this balance, create tensions and activity. Hunger leads to activity in general, produces visceral tensions. When aroused, this hunger drive energy seems to flow over and produce faster learning even in nonrelated experiences.

Thirst, fatigue, extremes in temperature, tissue injury, and the like, produce other tensions or drives. The hormones secreted from the glands of the body cause chemical changes, disequilibrium, drives. The hormones from the sex glands, for example, raise the general activity level. Excessive thyroid secretion produces hyperactivity, irritability, and nervousness. Deficient thyroid secretion reduces the individual's activity. The hypothyroid is characterized as sluggish and lacking in alertness. Anemia and feeble-mindedness are other conditions which often reduce the activity of the individual so afflicted. Ill-health is frequently the cause of behavior classed as lethargic and indolent. Even long thwarting of an individual's desires may condition him into a pseudo-laziness, an unwillingness to try.

The life processes are continually producing energy which flows out into activity. Activity fosters greater energy production. The healthy individual is active, curious, exploratory, and manipulative in behavior. Until he learns specific patterns toward which his drives are oriented, he tends to approach, examine, and manipulate any stimulus which is strong enough to catch his attention, but not too strong.

Overstimulation usually causes avoidance reactions, whether the stimulus be extreme cold, heat, pain, light, or what not.

Overstimulation produces diffuse and deep visceral changes, a state of disequilibrium which is akin to emotion. Perhaps emotion is originally just some form of diffuse tension due to very strong stimuli. Later, conditioning may attach this "stirred-up state" to milder stimuli. When these milder conditioned stimuli release emotional energy, the overt responses may be facilitated or they may be inhibited. Inhibition may be due to a motivation of an avoidance nature; or it may be due to an over-charge of energy which diffuses throughout the individual, overexcites him, produces such a variety of random activity that focus of energy on specific response patterns is prevented. The system is flooded; hence, direction of current is impossible.

Two extremes of motivation. One type of motivation is characterized by persisting, annoying, uncomfortable tension. Pain and discomfort, mental or physical, are present. The individual must escape the stimuli to ease his tensions. He acts to remove the cause of the disequilibrium and to avoid the producing situation. Failure, social disapproval, insult, and tissue injury are examples of stimuli producing avoidance behavior. The visceral tensions from such stimuli may be tremendous.

There is another type of motivation which is characterized by pleasantness and pleasurable emotion. The individual acts to prolong and perhaps increase the intensity or amount of the experience. Success, physical comfort, social approval, praise, petting, and dancing are examples of stimuli which motivate the individual to seek further, or more intense, stimuli.

This latter type is characterized by tensions, drives, and disequilibria just as the avoidance type is. If the individual were complacent and satisfied, he would not be stirred to *seeking activity* by the stimuli. Sometimes the drive to this seeking type of motivation becomes very intense. Sex is the common example, but there are many others. Power, suc-

cess, admiration, social approval, and beauty of art, music, and literature may become increasingly sought after by the individual experiencing these as personal satisfactions.

Analysis of motivation reveals childhood beginnings. The type in which furtherance or increase of stimulus is sought begins with the cuddling, rocking, petting, and praising of the youngster. He learns to seek praise, social approval, and the like. But the origins of extreme desires for power, fame, and social approval seem to relate to both escaping and seeking motives. Early need for social recognition, for example, can be thwarted until it turns into an abnormal craving. Napoleon is a classic example of abnormal craving for recognition and power. He is supposed to have been an object of derision to his schoolmates. Restraint and disapproval fostered in him the development of voracious hungers for mastery and recognition.

The teacher who utilizes strong stimuli to avoidance motivation should make sure that strong satisfactions follow. Too much failure distorts one's motivation. Unfortunately, many teachers fail to realize the effect of the avoidance motivation present in competition, rivalry, and even in awards for success. Someone loses when someone else wins. Rivalry implies that some students *fail* to equal or surpass their rivals. The fact that merit awards were not attained may make a failure more intense. Situations in which students try arduously, and yet almost continuously fail to win or to earn coveted awards, cause maladjustments in personality. Such situations are inimical to education. An increasing number of teachers are giving awards and recognition for personal improvement of pupils rather than for total accomplishment only.

Maladjustment to failure. Too many disappointments teach students to give up too easily, or not to try at all. Students blame the teacher or the examination for their failure, in order to escape the greater annoyance of admitting their

own weakness. They may claim that they were not well, that they were worked too hard, or that the learning was of no value to them anyway. Some explain that they are in no hurry to learn and that an additional year in school is what they really want. One youngster tells his gang: "The Old Man gave me a licking and can I take it? It just makes me grow."

Students denied praise and recognition for success may seek attention and notoriety by misbehavior. The boy group-attitude that the good student is a "sissy" is a reaction to escape the feeling of inferiority, a feeling engendered by failure to attain desired levels of success. The so-called "sissy" defends himself by speaking of "dumb athletes." Has competition taught these boys to enjoy the failure of others? The competitive system of relative grading may be a major cause of such attitudes.

How can one develop aversions to subjecting his own behavior to reason and analysis? Narrow, illiberal, bigoted thinking and behavior have more than ignorance as a causal factor. Underlying fear that one may be wrong and a felt need to avoid any such humiliation are factors. Persisting disequilibria due to a conflict in motives may have caused this adjustment—adjustment by stressing the stimuli to one motive and suppressing the stimuli to the other.

Too many disappointments and failure tend to make one oversensitive to criticism and failure. Failure in little things takes on undue significance. *The teacher must make available to the student, activity which has as its outcome results interpreted as personal successes by the student.*

A list of major motives [3] which energize the behavior of man with some of the drives from which they probably originate follows:

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[3] Consult Shaffer, L. F., *The Psychology of Adjustment,* pages 100–108. Boston: Houghton Mifflin Company, 1936.

Motives	*Drives*
1. Activity motives	Energy of life processes and natural response to stimuli
2. Subsistence motives—man's economic activities	Organic needs, such as hunger, thirst, and temperature regulation
3. Social recognition and approval	Organic needs—early dependence on other's care and kindness for these needs orients toward others
4. Mastery motives—to excel, to succeed, to dominate	Reaction to restraint, rage
5. Conformity motives—submission, obedience to law and order	Fear and pain
6. Sex motives—relations of all types to the other sex, sublimations, conditioned symbols	Sex
7. Mixed motives—habits, urges to acquire, to be secure, to care for children, and so forth	Emotional tensions and organic drives

Most adult behavior is energized by a combination of motives; for example, pursuit of one's vocation, in addition to subsistence motives, may have desire for social approval or plans for sex and marriage as dynamic factors. One may work harder at his job to expend the excess energy generated by a fit of anger or to expend energy generated by sex tensions.

Purpose. When the individual is aware of a drive and ideates plans of personal activity to satisfy the drive, he is *purposing. The teacher obtains best results from pupils when he can get them to ideate and voluntarily adopt purposes which necessitate participation in needed learning activities.* Such activity has the advantage of being so carefully planned that it proceeds in a definite direction without too much wandering and waste of time. The pupil adoption of the purpose implies vigorous attack. The teacher's main task is

done when he attains this type of motivation. He now watches the details of the environment—equipment, supplies, aids and devices, temperature, light, atmosphere for work—so that all stimuli will focus the attention on pursuit of the purpose. The teacher submits his own evaluations when needed to insure accurate and adequate progress. He helps in organization and *re*-view.

Types of incentives. In all teacher attempts to guide and control student behavior, the question arises as to what kind of incentives the teacher should use. Any incentive is better than none, in so far as the rapidity of learning of those activities to which it applies is concerned. No incentives really act by themselves. The dread of failure and the hope for success are dual stresses in motivated activity. *Avoidance incentives add to the dread of failure, and rewards add to the hope for success.* Which phase of this motivating dichotomy exerts the most drive depends on a great many factors. Previous success and failure experiences of the individual vary his amount of tension to each; for example, a well-known athletic coach declares that he is not so much concerned about winning but that he "sure hates to lose." The public seems to take it for granted that his teams will win. Success occasions little congratulation. On the other hand, loss of a game seems to produce much emphatic, noncomplimentary comment.

In general, experimentation in the field of incentives has indicated that praise, satisfaction, and reward are better techniques for fostering learning than reproof, rebuke, criticism for error or failure, and the like. There is tremendous variability among individual pupils in effectiveness on them of various incentives. Reward incentives such as praise seem to be much more effective as an aid to learning when applied to the less skillful or less able students than when applied to the superior. Avoidance of criticism for error, of teacher-expressed dissatisfaction at level of achievement, and the like, seem to be more effective incentives with supe-

rior students. The combination of both types of incentive is better than either alone. Perhaps the superior need more criticism to keep them challenged and to keep them from being satisfied with anything but their best efforts; and the less successful students need more praise to keep them from becoming too discouraged to put forth their best efforts.

In general, it seems advisable that the teacher bring into play as many incentives as he can focus on the learning activities. Incentives to other types of activity, incentives which conflict, should be removed in so far as is possible. If social approval is the most effective, stress that particularly; but if mastery motives seem to be the most powerful, give the individual rewards such as responsibilities for direction and leadership, demonstration, and the like. *Stress the incentives which seem to focus on the learning activities the strongest driving force available.*

It is assumed that the teacher will keep in mind the total learning situation. The recommended use of strong motives does not imply the development of antisocial or personally harmful phases of motivation. Appeals to selfishness, cultivation of dislike for a rival, and encouragement of notoriety-seeking are examples of malpractices in the use of incentives.

An abbreviated list of incentives and devices used by teachers follows:

1. Stressing freedom and independence of the students; having them choose objectives and select leaders, captains, chairmen, and student assistants to the teacher.
2. Teacher comment or reaction to student achievement; use of sarcasm, compliment, praise, or temporary but complete refusal to notice.
3. Emotional appeals through pep talks, inspiring stories, pep meetings, alumni speeches.
4. Animated and enthusiastic demonstrations by the teacher; followed by impelling and exacting demands on student effort, with personal interest in and individual guidance for each student.
5. Individual progress records, graphs, statistics: self-rating scales,

scoring records, batting averages, time records in events, strength indices, and the like.

6. Good equipment—gives opportunity to take pride in appearance.

7. Public recognition by newspapers, radio, assembly programs, movies of activities, bulletin-board publicity, banquets, and the like.

8. Competition, cooperation, even corecreation, in games, tournaments, playdays, intramurals, exhibitions, pageants, and so on.

9. The awarding of prizes, ribbons, pennants, letters, medals, and the like, for successful achievements.

DISCIPLINE

What place has discipline, the bugaboo of the beginning teacher, in the acquisition of motivation? It has a very important place. Constraint and forced obedience may be necessary at times for the protection of the individual student, or for the protection of the group. Punishment, in the sense of pain, suffering, loss, dissatisfaction, failure—any stimuli which will cause avoidance reactions in the individual—may be needed as a deterrent of behavior. Discipline, in this sense, should never be used unless an alternative, teacher-approved course of action, is known to the student. Punishment of a student, when he does not have sufficient guiding cues to proper adjustment, may stir up strong, disorganized emotional responses and consequent personality maladjustment.

Discipline merely means the guidance and control of behavior. Ideally, all discipline is directed toward the student's achievement of self-discipline, the result of positive motivation. The teacher who is able to guide student activity by stimulating and focusing student motives in the right direction has reduced the need for control by force and authority to a minimum. In addition, he is teaching, as concomitants, habits and attitudes toward work, toward the specific learning experiences, and toward life.

Society demands certain conformity to its regulations. In

addition, society prizes highly the learning of good manners, tact, and consideration of others. Dependability in doing one's job, conformity to group regulations, promptness, assumption of responsibility for getting work done, honesty, and tolerance are examples of highly desirable products of learning. They are some of the disciplines of civilization. One learns such behavior just as he learns the easier lessons of the class, though more slowly. These more mature aspects of learning are harder to teach. The children need much guidance and help in the process of attaining them.

Natural and social laws may often be broken without immediate reprisal. Acceptance of, approval of, and obedience to law require long education. Socially approved traits such as industry, thrift, caution, neatness, punctuality, exactness, concentrated and sustained application to uninteresting tasks for the accomplishment of a distant goal, enforced logical attack on a problem, all contribute to self-discipline. Their acquisition requires intense, but often uninteresting, practice.[4] One may *know* of the usefulness of such traits long before practice of them has made them a voluntary part of his behavior. It seems difficult to conceive of any method of education which could furnish such training without the use of techniques of restraint, compulsion, and exacting requirement.

The teacher should not fall into the fallacy of thinking that greater easiness of the learning task produces greater interest. The learning problem must be a real challenge to the learner. *Need for vigorous and intense effort is more likely to add to than to detract from interest in learning.* In worth-while pupil attacks on learning problems, it is important that the teacher require the pupil's best efforts. The pupil tries to

[4] Mitchell, Elmer D., and Mason, Bernard S., *Theory of Play*, page 69. New York: A. S. Barnes and Company, 1934. The authors present the view that uninteresting practice is often needed before play habits are formed; that participation may be distasteful until skills and interests are formed.

live up to expectations but expends little effort to excell them.

There are only two justifiable reasons for the use of "disciplinary" techniques: one is the necessity of such technique, at times, to protect the individual or group; the other is that learning may thereby be facilitated. The first reason applies particularly to young children. There may be times also when the older student or student group needs protection from some incorrigible student, or from some milder student maladjustment. The second reason, that learning may thereby be facilitated, is deceptive in its apparent simplicity. The following illustration may indicate the difficulty of applying "progress in learning" as a test.

A certain biology professor was noted for the amount of work he secured from his students. He taught high school biology entirely from the logical approach. His methods were similar to those used in premedical courses in college. Great quantities of scientific knowledge were introduced, flora and fauna were analyzed, classified, and scrutinized, ontogenetically and phylogenetically. Students completing the course were convinced that they had profited greatly by the course. They put their books away and said: "Thank God, that's over." Very few ever again took further work in the biological sciences or showed interest by reading or leisure-time pursuits.

The lesson that the biology teacher had taught most thoroughly was that personal satisfactions could not be found in his field of knowledge; and, perhaps, that much annoyance accompanied any delving into the field. Attitude studies in the field of physical education indicate that avoidance attitudes are also being taught in that field. If any phase of education is to continue through life, it must become a part of the student's positive motivation rather than a part of his avoidance motivation. Teaching which produces student avoidance motivation toward a field of educational experiences thereby writes *finis* to the student's education in that field.

Motives are learned, are persistent, and determine the direction of one's expenditure of energy. Avoidance motivation toward specific learnings does more than stop further learning in that field. It accelerates the speed of forgetting what has already been acquired. Unfortunately, the antagonistic attitude is less easily forgotten.

It is a sound principle of learning that wrong responses should be made annoying to students, just as it is that correct responses should be made satisfying. The difficulty lies in the adjustment of the degree of annoyance so that the individual will be dissatisfied, and yet not so "upset" that he is unable to learn the approved behavior. When the white rat receives too violent a shock in the cul-de-sac, it runs about wildly and ceases to learn the maze. The human, likewise, becomes confused and ceases to learn when he is overstimulated.

The disciplining of the child may require considerable firmness to protect him from serious injury, to protect others, or even to protect property. The facilitation of his learning may require some punishment, but it should be punishment with guidance toward correct behavior. *The teacher must display objectivity about the wrong behavior and its displacement;* and a very evident feeling of kindness and concern for the child and his welfare.

Discipline problems of a serious nature necessitate diagnosis of underlying causes. The behavior itself may arise from emotional upsets or conflicts that are not immediately apparent. These may originate in the home, in the social life of the child, or elsewhere outside of school. The physical inactivity of the schoolroom may be a real cause. Repressions of tendencies to talk, to help a friend, to have moments of fun and relaxation may be causes. Uninteresting assignments and too difficult or too easy assignments may be causal factors.

Students will do something. If the teacher does not find

them something to do, they will supply the need themselves. Mischievousness is usually just excess and misdirected energy. Sometimes, uncomfortable physical conditions in the learning environment irritate the students and make them harder to control. Ill-health is a contributing factor to behavior maladjustment. Harsh discipline techniques, which the individual does not understand the reasons for, cause negativism and rebellion. Moreover, students will imitate each other in misbehavior as well as in correct behavior. One must remember that their moral judgment is relatively immature, and their social training dependent on their home background. If they want greater social attention, they may resort to extreme behavior to get it. If the sex urge accompanies the urge for social recognition, the boy may tease the girl, or *vice versa.*

The teacher does not treat the immediately manifest symptoms but the underlying causes. Just as the doctor diagnoses the patient and prescribes for his specific disorder, so must the teacher diagnose the pupil and treat him for his specific disorder. Just as weakness, fever, and loss of appetite may have many and diverse causes, so may nonobservation of rules, impertinence, and emotional outbursts have many causes.

This viewpoint of diagnosis and prescription to remove causes is a little difficult for the beginning teacher to acquire. He is likely to be more concerned about changing the symptoms than the underlying causes. It is the disorder in the school that concerns the beginning teacher, not the disorder in the pupil. If the pupil can be repressed, he causes no confusion. True, he may lose his initiative, feel more of an outcast, lose whatever slight confidence he had in himself, or lose his interest in learning and self-betterment; but he satisfies the teacher if he becomes outwardly docile and conforms to the routines of the "mass education" process. What matter if he finds all his pleasures outside the school, or in phan-

tasy and daydreaming? Perhaps he waits until after school to turn loose the pent-up energy from his frustrations and rebellions in anti-social behavior. He may even become a nonquestioning, obedient-to-orders, submissive type of individual. The teacher should be greatly concerned. A democratic state cannot afford to pay out money for the production of such citizens.

Let us assume that the better teacher is guiding the child. Such a teacher is not lacking in firmness where firmness is needed. He is kind but objective. He treats the pupil without fuss and ado, usually privately. His techniques involve informal conferences, private suggestions, mild punishment for wrong behavior with direction toward the correct behavior, and sympathetic helpfulness. *His punishment is as mild as it can be, and still be effective.* It is the pupil's idea of the meaning of the punishment that is important. This teacher uses punishment to clear up the trouble *for the pupil,* and sometimes even to ease the pupil's feeling of guilt. This excellent teacher may literally be *helping* the pupil to protect himself from his own rash impulses.

It is not unusual for pupils to appreciate such constraint. They respect and admire the teacher who exacts a high grade of performance, requires them to observe healthful habits of eating and sleeping, and spurs them on to better performance.

There are rare situations wherein school discipline has deteriorated to such an extent that the pupils test out the new teacher's *ability* to enforce school regulations and procedures. Extreme measures may be necessary to handle this abnormal situation. Whether physical force should be used is an open question. Many authorities say it should not be used at all by teachers. Certainly a woman teacher would be foolish to try physical force on youngsters as large and strong as she is. The teacher should anticipate the situation, decide upon suitable techniques, and make sure they are both legal and permitted by the administrator. The teacher should avoid

physical force if possible. If he decides he must use physical force, he should be sure that he is capable of carrying out the planned procedure successfully. A student ringleader or two may need to be handled severely. *The good of the majority cannot be sacrificed for one or two problem cases.*

Once the proper learning atmosphere is established, the teacher may undertake the re-education of the problem cases. The harsh punishment may have had results which prevent future success with these special cases. This is the reason that physical force is used only as a last resort in the public schools and perhaps should never be used. However, it is also possible that severe treatment will make expulsion unnecessary. The pupil may deserve this chance before he is thrust out into a none-too-kind world to be treated even more roughly when he fails to conform; where his maladjustment may result in serious trouble for himself and his fellow citizens. The teacher should remember that the misbehaving pupil is a result of partial failure of education up to the present. He is in even greater need than the average of kindly guidance, firm as it may need to be.

Since *the beginning teacher* is inclined to be lacking in confidence, it is not uncommon for him to be overly severe. He of course must be more cautious about proper social distance between himself and the pupils than the experienced teacher. His very youth makes him more likely to be taken for "one of the gang." He does not yet know an adequate variety of techniques, he has more trouble keeping his emotions out of the picture, and he has not yet the prestige and dignity of the experienced and well-known teacher. The following incident illustrates the lack of confidence, emotional coloring of the problem, and over-severity of reaction in a beginning teacher. This type of error is not uncommon.

A beginning teacher in a secondary school was having some difficulty in keeping a reasonably quiet and orderly study-hall. She was unsure of herself, inclined to be overly harsh,

and to let her emotions enter the situation. She reprimanded harshly one rather bright and ordinarily well-behaved youngster for some slight misbehavior. He mumbled something in reply which she did not hear. She asked him what he said but he would not tell her. She insisted. The boy still refused to tell what he had said. After the situation had become quite emotional, she sent the boy to the principal's office.

The principal noted the boy's upset condition, greeted him in a friendly manner, motioned him to a chair, and asked him if he would mind waiting for a few minutes until he, the principal, could finish his present task. The boy sat down and gradually relaxed. After five minutes, the principal thanked the boy for waiting and asked him how he could help him. The boy told the whole story except for the specific words he had mumbled. He merely remarked that he had mumbled something.

The principal said, "Well, Son, that doesn't sound very serious. I am sorry you had trouble with this teacher, but that will iron out. If I explain to her that the occurrence is over and everything is back to normal, do you think you can get along without further difficulty?"

The boy assured the principal that he could. As the boy rose to leave, the principal asked with a smile, "By the way, Son, what did you say?"

The boy chuckled and said, "All I said was, 'My! My! What a teacher!' "

Here are a few additional suggestions to help the beginning teacher over some of his problems:

1. Always be "a few jumps ahead" of the pupils. Have the work planned, the equipment ready, the procedures organized so that all will be busy every minute. Have an emergency plan ready in case of interruption. (Rain may stop outdoor activity, some organization may take over part of the gymnasium at the last minute, and so forth.)

2. Be meticulously careful about your own appearance. Watch that your voice does not betray a feeling of irritation, fatigue, or lack of enthusiasm.

3. Do everything possible to make the environment conducive to learning.

4. Organize, when helpful, student groups and leaders; use student proctors and managers and other democratic procedures to the extent that seems feasible.

5. Set up necessary routines at once, but have no rules or routines unless they help the learning situation. Avoid a "treadmill" atmosphere.

6. Take good care of your health so that you have a lot of life and energy. You will need to be alert every minute. Plan your work so that you can keep your eye on the whole group—to be out of sight of the teacher may be a temptation.

7. Don't be a "puritan." Don't expect perfection in social and moral behavior. Have such perfection as an ideal but be human. Have a sense of humor. Expect high achievement from each pupil within his own ability range, but do not expect the impossible.

8. Separate the disturbers quietly, almost unnoticeably. Treat them individually.

9. When direct action is necessary, act promptly. Act as if you were confident of pupil readjustment of behavior. Suit the intensity of any punishment to the pupil and make it private if possible. Punishment changes its very nature in the presence of others. Its effect may be entirely different.

10. Be a sympathetic guide to improved behavior, not an avenger of evildoing.

11. Do not punish the group for an individual's behavior.

12. Do not use school work or extra school time as punishment. By so doing you are teaching the pupils that each is distasteful and is something to escape.

13. Belittling the pupil in front of his schoolmates by sarcasm is a very cruel form of punishment. Be very sure of its effect before trying it.

14. Extra fuss in front of the group over inadequate learning is the same thing as severe punishment in most cases. Correction should stress the procedures for improvement more than the errors already committed.

The teacher should handle his own discipline problems if

he can. Calling on the principal for help except in real emergencies is a sign of weakness. Even the appeal to the parents for help must not be too frequent. The intelligent parents are likely to know their youngster and his weaknesses. They handle him at home and they expect the teacher to do even better at school.

Additional principles of discipline follow:

1. Using additional learning activities as a form of punishment may condition the student to dislike the activities.
2. The practice of excusing students from regular classes or from activity practices as a reward for good work implies that the activities are annoying—that it is a satisfaction not to do them.
3. Unpleasant experiences are not beneficial just because they are unpleasant. Some positive motivation must ensue from the experience in order for value to be obtained.
4. Blind obedience to orders is a questionable form of discipline for intelligent people.

Certain principles of teacher deterrent techniques follow:

1. In the sense of revenge, justice, or retribution, no student should ever be *punished.* He should be *taught* correct behavior by making the wrong behavior unpleasant and the correct behavior desirable.
2. Disciplinary techniques should be designed to make certain specific behavior unpleasant, should be understood by the student, and should not interfere, even indirectly, with his other learning activities.
3. Techniques for individual restraint and control are entirely different stimuli when they are applied in the presence of others.
4. The student and the teacher should work out together, as objectively as possible, the plan for the modification of the student's behavior.

QUESTIONS

Examine the following statements, express your agreement or disagreement with the suggested treatment, and explain your viewpoint:

1. If the class refuses to reveal who placed the tack on the teacher's chair, the whole class should be punished.
2. If a pupil tells a teacher to go to Hell, the pupil should be compelled to make a public apology in front of his classmates.

3. If the class appears unprepared for the lesson three or four times in succession, the teacher should refuse to meet them again until they assure her that there will be no recurrence of such unpreparedness.

4. The school has a rule which states that only three days of absence are permitted without a medical excuse or an excuse by the school authorities. Any further unexcused absence will result in a minimum of three days' suspension with zero grades in every subject during days of suspension. A pupil was absent for a trip to see the national Capitol, one day; also, one day for the circus; one day for the opening of the small-game hunting season; and one day for the opening of the deer season. He should be suspended.

SAMPLE TEST ITEMS

Yes-No

1. Do motives have to be learned?
2. Are incentives internal stimuli?
3. Is the urge to vigorous activity a result of learning?
4. Are organic drives focused toward specific patterns of behavior even before learning takes place?
5. Does the psychological rather than the logical method imply that appeal to motives may be more important than a logical sequence in order of presenting learning experiences?
6. Does the term *purpose* imply that the drive is entirely intellectual?
7. Does the teacher *motivate* the student?
8. Is the hungry person necessarily less efficient in learning activities during the period of his hunger?
9. May overstimulation of drives to learning inhibit that learning?
10. May pleasures experienced increase the drive toward those pleasures?
11. Would a toothache be classed as a motive?
12. Does failure increase the desire for success?
13. Is there a danger that intense degrees of competition and rivalry may maladjust personality?
14. Has the student who enjoys the lack of success of others learned this type of enjoyment?
15. Are organic needs causal factors in the learning of desire for social approval?

16. May sex hormones add to energy available for sport participation?

17. Is there any place in modern education for restraint and forced obedience?

18. Is the learning of self-discipline facilitated by an environment devoid of external restraints and controls?

19. Should the student be punished by being made to expend extra time and effort at some type of learning experiences?

20. Should excellent work be rewarded by excusing students from learning activities?

21. Should the amount of criticism and reproof of a student be proportional to his degree of failure to achieve approved standards?

22. Does the use of antisocial incentives occur in many school situations?

23. Are we born with a conscience which directs us and makes character education unnecessary?

24. Should a large number of activities be included chiefly because of their disciplinary value?

25. Do activities in which students must work strenuously but in which they are not interested have more disciplinary value to the student than the more interesting activities?

26. Is the teacher chiefly responsible for securing the correct mental set for the activity of the day?

27. Is the use of negative incentives occasionally justifiable?

28. Is easiness an important factor in the arousal of interest in the activity?

29. Should the erring pupils be induced to cooperate in the selection of their own punishment?

30. Should pupils discuss and agree on conduct codes?

31. In order to stop the immorality and degeneracy of the adolescent period, should the discipline be severely firm and objectively just, without any leniency for mistakes?

32. Do individual differences make it impossible to secure perfect moral responses from every pupil?

33. Should high school students be dropped from class or failed when caught cheating?

34. Is cheating best prevented by assigned reading on the nature of morality?

35. Do educators agree that strict discipline is a prerequisite for greatest achievement of ultimate values in class work?

36. Is ethical character more effectively taught through the Social Studies than through Physical Education?

37. Does instructional efficiency have a high relationship to school morale?

38. Is it wise to put the bright, active pupils in the back of the classroom as an aid to discipline?

39. As a rule, should the teacher sit behind his desk during classroom periods?

40. Are fear and force ever justifiable as means for maintaining discipline in high school?

41. If a pupil openly defies the teacher, should the teacher ignore it?

42. Should *incorrigible* pupils be handed over to the higher authorities?

43. Is it good pedagogy to make many rules even though some of them are not obeyed?

44. Is the most efficient social training assured when the teacher withdraws in favor of pupil leaders?

45. Are the rude knocks from companions at school good for all children in that they take away self-centered notions?

46. Does strict repression encourage lying and deceit?

47. Is self-assertiveness usually a compensation for feelings of inferiority?

48. Is the child's attitude toward conformity to approved social standards primarily the result of his innate brightness?

Note: *If some of the above questions cannot be answered by a blunt yes or no, why?*

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19.

Principles of Method

"Method is essential if you would get through your work easily and with economy of time."—W. MATTHEW.

ONE REASON there may be some justification for the saying, "Young teachers teach as they were taught, not as they were taught to teach," is that during the undergraduate period of teacher education they are overwhelmed by the complexity of teaching. *Another* reason is that the observant novice knows that many teachers who "get by" well enough to hold their jobs do not practice some of the principles underlying better teaching. A *third* reason is the human error of believing that, if one imitates precisely the specific techniques of a successful performer, he too will be a successful performer. A *fourth* reason is that a discussion of better teaching between professor and undergraduate student soon reaches the point that transcends the limits of the student's experience, appreciation, and understanding.

Some of the preceding chapters have been abbreviated by including guides for teachers in the form of principles that suggest teacher *activities.* It is hoped that this abbreviated form may be one means of encouraging teachers to attempt seriously to teach better than they were taught. Toward this same goal the present chapter is directed. An analysis of teaching reveals several areas of teacher activity worthy of emphasis. The teacher *presents, demonstrates, explains, ana-*

lyzes, individualizes, promotes socialization, guides participation, selects, and uses sensory aids in addition to the principles and techniques of teaching already discussed in Part Six.

Principles of presentation. Principles of anticipation and preparation already have been discussed. The teacher is now ready to meet with the class. Following the usual routines, attention is obtained and the lesson is *presented.* The following sample list of principles of presentation follows no sequential or chronological order—no such order could be given to fit, in general, teaching situations:

1. Permit class to become familiar with the equipment and facilities used in the activity.
2. Discuss, very briefly, the main purposes of the activity.
3. Arouse curiosity, establish felt difficulties, and set up challenges as bases for motivation throughout the presentation.
4. Provide participation in the whole activity, permitting as much experience in it as possible without interruption.
5. Present analysis of pupils' respective performances in various aspects of activity as they participate in whole activity.
6. Present demonstration of certain part of activity with which most pupils are having difficulty.
7. Present demonstration to a few pupils of a certain part of activity with which they are having difficulty but with which other pupils are not. Adopt technique of conducting this demonstration without interfering with the remainder of the class's participation.
8. Keep demonstration of and participation in a *part* of the activity closely related to the whole activity.
9. Give explanations that do not seriously interfere with participation, and that detract from demonstrations as little as possible.
   a. Concentrate on helping pupils secure general idea of "how to do it."
   b. Avoid unrelated but "interesting" (to the teacher) material.
10. Provide for questions after reasonable degree of participation.
   a. Keep answers practical—use blackboard (diagrams) or demonstrations.
   b. Switch questions about *detailed* skills to the basic framework.

11. Reach temporary conclusions regarding the abilities of the class or of an individual.

12. Maintain group attention, when it is desired, by having pupils placed advantageously; by aiming what is said and done at their level; by being master of what is taught; by sheer exertion of personality; by wording and planning what is to be said and done so that it is concise, clear, and colorful; by planning the lesson so that attention is usually sought at appropriate times and places.

13. Help pupils set up their own objectives and values of the activity.

14. Evaluate results of presentation, followed by plans for next lesson in light of this evaluation. Note pupils who are having most difficulty with the activity.

15. Observe the routines and procedures of class management and organization throughout the class period.

16. Establish and maintain a positive attitude and atmosphere; the pupil should be made to feel that it is possible for him to learn the activity; the learning should be meaningful to him.

17. Recognize that pupils vary in their assimilability and personality as well as in their comprehension and physical education background.

18. Keep alert to reactions of individuals to your explanations and demonstrations so that the point being made can be presented in a different way if several in the class obviously do not comprehend.

19. Use more "reward" techniques than "punishment" techniques when class is learning an activity.

20. Maintain an informal type of poise; avoid showing irritation and discouragement at the pupils' poor performances; avoid "nervous" moving about and mannerisms.

21. Keep alert to a waning of interest or appearance of discouragement; be prepared to make the learning easier or seem easier; or in rare cases subtly change to another similar activity.

22. Locate or distribute pupils, if possible, in the activity so that their chances of success are enhanced.

23. Keep the learning moving at a rate that is challenging but not overwhelming to the pupil.

24. Aid the pupils in summarizing the chief learnings of the lesson.

The above principles emphasize leading from the known to the unknown, take into account individual differences, provide for pupil responsibility, consider pupils' values, and

provide the opportunity for the pupil to learn by doing—all of which are teaching principles of larger scope.

Principles of demonstration. We have been viewing the presentation of a physical education activity or lesson from a rather long range. From this vantage point, certain aspects of teaching already discussed—for example, class organization and motivation—seem to shrink in importance when compared to the amount of attention given to them earlier. For the purpose of viewing them at close range, let us therefore select several other important phases of teaching physical education which appear rather insignificant in the lists in preceding chapters. One of these is *demonstration.* Here are some of the principles of demonstration:

1. Determine the specific purpose of the demonstration before presenting it. For example:
   - *a.* Present a demonstration of the whole activity when introducing an activity so that subsequent practice and instruction has direction and meaning.
   - *b.* Present a demonstration of a detailed skill to a pupil who is having difficulty with the execution of it.
   - *c.* Present a demonstration of a skill in varying situations to show him it is used differently in different parts of the game or as the game changes.
   - *d.* Present the demonstration as a motivation procedure.
2. Make certain that the demonstration creates the kind of model desired (it is strongly advised that the teacher practice any planned demonstration beforehand).
3. Select a few skilled pupils to try a given activity after a demonstration so as further to show the class that it can be done.
4. Use pupil demonstration sometimes when it is more effective than demonstration by the teacher.
5. Keep the demonstration at the pupils' general level of ability. They will not desire to attempt an activity they know they can't perform.
6. Provide opportunities for participation as soon as possible after the demonstration.
7. Make the demonstration long enough to accomplish its purpose

but short enough to avoid interfering unduly with pupil participation.

8. Demonstrate any major error in a pupil's performance, as well as the correct performance after he has observed the demonstration and has had an opportunity to participate.

9. Conduct a demonstration ordinarily at the tempo used in actual game situation, except when movements are too fast or complicated to be adequately observed and assimilated by pupils.

10. Give pupils at least one good reason for performing a given skill a certain way, during a demonstration. This statement does not apply to introductory demonstrations.

11. Direct the pupils' observation and attention during a demonstration by word and gesture instead of relying on pupils' memories. Avoid talking too much.

12. Prepare pupils beforehand for precisely what is to be demonstrated.

13. Adapt complexity and detail of demonstration to level of maturity and ability of class.

14. Place the class and the demonstrator(s) in relatively advantageous positions.

15. Make sure that an introductory demonstration "drives home" socially approved conduct as well as skills.

16. Permit class to imitate the demonstrator as he presents a certain skill, thus using the kinaesthetic sense as well as visual and auditory.

17. Make use of the largest assimilable whole, ordinarily, in demonstrations. Even in demonstrating parts, they should be tied in with other and related parts or, better yet, the whole activity.

18. Make it understood that none but the most pertinent questions should be asked after the introductory demonstration, prior to participation (see 6).

19. Secure a skillful pupil or an outsider as a demonstrator if you are unable to appear to advantage in that role.

20. Provide the demonstrator(s) with equipment similar to that which the class is to use. If equipment used in the demonstration is obviously better, the class may become discouraged. It has an "alibi."

21. Develop interest and group responsibility by permitting pupils to prepare beforehand an introductory demonstration.

22. Evaluate results of demonstration, partially in terms of the pupils' evaluation of it.

Principles of explanation. A phase of teaching physical education closely related to the demonstration but more overdone is *explanation.* Coaches of athletic sports have learned the truth of the saying: "We do not learn experience but through it." And while some purposes of athletics are perforce different from those of physical education, still most physical education teachers also are concerned about most rapid and most efficient techniques of teaching skills.

1. Develop a vocabulary of words meaningful in terms of the activity, keeping in mind the mental level of the group.
2. Work continually to shorten and simplify words and phrases in explanations and in answers to questions, and yet be complete enough to be understood.
3. Make explanations serve their respective purposes.
   a. If questions are desired, make the explanation lead to them.
   b. If answers are to be the goal, word the explanation accordingly.
   c. If a given series of movements, for example, is confusing, the teacher may wish to analyze each, through explanation.
4. Begin explanations with what the learner knows.
5. Make sure that the class interprets words and sentences as they are meant.
6. Practice giving the major purposes of an activity in a short time with the help of illustrative devices.
7. Be informed on the origin and development of the activity.
8. Keep the explanation moving forward at a rate that keeps the class alert and in a manner that keeps them interested.
9. Avoid beginning any explanation if the situation is unfavorable but remediable. For example:
   a. Pupils facing light.
   b. Distractions.
10. Show enthusiasm, and more enthusiasm if it is expected from the pupils.
11. Avoid repetition of words and phrases. Repetition of ideas that clinch points is necessary.
12. Adopt mannerisms that add to, and eliminate those that detract from, the explanation.
13. Make the explanation as short as possible.

14. Make use sometimes of the relaxation or rest period for explanations.

15. Keep control of your voice—rate (about 150 words per minute), low pitch, varying inflection, rich texture, clear enunciation, proper pronunciation.

16. Display a sense of humor at appropriate moments.

17. Make your explanation appear simple, logical, and coherent.

18. Use visual aids whenever possible and appropriate.

19. Place a class in the corner of a gymnasium when the acoustics make lengthy explanations to them in "class front" difficult. Under such circumstances, decrease rate of speech and lower pitch of voice.

20. Stick to the point of the explanation and reach it quickly so the pupils can participate.

21. Permit pupils to get into a comfortable place and position before you start talking, if the explanation is to last for more than a moment or two.

22. Maintain an easy, alert carriage while talking.

23. Postpone any moderately long explanation, if the class is to travel quite a distance before beginning the activity. That is, if the activity is to be outdoors, do not give the pupils the explanation of the activity in the gymnasium.

24. Avoid preaching and haranguing; pupils like activity.

25. Establish and maintain a courteous, positive approach throughout any explanation.

26. Use the blackboard or spell verbally such unfamiliar words as the names of pieces of equipment used in a new activity.

27. Let pupils try explaining if experience shows that certain of them can perform this function creditably.

Principles of individualization. The following principles of teaching apply to individualizing teaching. The novice teacher is apt to forget that only insofar as the individual student is reached and interested by the learning situation, does he learn. Even in the Group Method, popularized by some recreationalists, the *individual* must be reached. The following are a few principles of individualization.

1. Let the student observe that you notice *him.*

2. Vary speech, demonstrations, simplicity of explanations and visual aids so that each student's background, physique, ability, physical competence, and intelligence are recognized.

3. If different grades are taught at one time or at succeeding periods, make sure to adjust teaching techniques to varying ages.

4. Permit a reasonable amount of individual variation in performing skills.

5. During explanations, use examples that come from hobbies and interests of class members.

6. Avoid overdoing individualization to the point of spending too much time and attention on one student at the expense of others.

7. In planning incentives and explanations consider the degree of sensitiveness or callousness which the student has.

8. Be alert to give recognition to individual talents and good performances and improvement.

9. Concentrate when possible on the individual improving his own level of performance, attitudes, sociability, and so on.

10. Be alert to evidence of frustrations, conflicts, and so forth, of the individual.

11. Strive to make it possible for each student in each class to experience success at something considered by him, the class or the teacher as worthy. When possible and desirable, recognize these successes.

12. Provide some opportunity for individual creative work or individual self-expression.

13. Provide opportunities for carrying responsibility by the individual.

14. Recognize that the rate of learning, development, and improvement varies from student to student.

15. Provide opportunities for some decisions to be made by individual students.

16. Provide opportunities for leadership and followership by the individual.

17. Permit program flexibility so that individual needs are met.

18. Practice social equality in providing opportunities, giving recognition, and so forth.

Principles of socialization. In the same breath that we discuss principles of individualization we should discuss principles of socialization. Over-emphasis on either one as a general practice fails in the proper development of the student. A nation, an organization, a team is strong only insofar as its individual members are strong—and they are strong

as a functioning unit. Often, each man on a team is poorest at one of the many requisite skills of the sport. It is well, therefore, for each person to understand and appreciate his dependence upon others, to recognize the strength of the group as a group. At the team-sport level, at the national and international levels, these truths form part of the students' education. The following are examples of principles of socialization in teaching.

1. Provide many opportunities for the individual to participate as a member of a group or a team.
2. Promote conformance to regulations, rules, and codes.
3. Provide for a changing of group leadership that comes from within the group. Avoid allowing the "natural" leader to dominate the group too much.
4. Stress the fundamental importance and necessity for the specific work performed by each member of a team, for the dependence of one skill or set of skills upon another skill or other skills.
5. Engender the "our team" idea, even though the players vary from one class period to another.
6. Recognize the worthiness of self-subordination for the good of the team as well as stellar performance for the good of the team.
7. Show the gearing of individual objectives with team objectives.
8. Emphasize team solidarity as distinct from dissension.
9. Promote transfer of training from team-sport experiences to life.
10. Recognize improvement in socialization of class members.
11. Promote sociability as well as the accomplishment of successful team performance.
12. Promote the ability to give and take, and the personal yielding to the will of the majority.
13. Encourage and adhere to the other standards of social behavior: fair play, sportsmanship, and so forth.
14. Allow expressions and feelings of pride and satisfaction in team accomplishment, with the admonitions that the sportsman wins with modesty and that few victories are the result of one man's play.
15. Encourage the feeling of group responsibility for team failure, with the admonitions that the sportsman loses with dignity and that few defeats are the fault of one man.

Principles of participation. The following principles, as will be seen, refer to the pupils' participation in physical education activities, although the teacher's relationship is suggested in most of the principles. It is apparent that several other sets of principles already mentioned focus upon pupil participation, but the present list of principles has to do more with participation *per se:*

1. Utilize the greatest possible amount of class time for pupil participation.
2. Arrange the activity so that there is maximum pupil participation and minimum teacher participation.
3. Use pupil participation time for other than skill learnings and development of organic vigor—for example, desirable social and human (moral) traits.
4. Devote most of the class period to those learnings that will be most valuable to most of the groups in most situations.
5. Divide class period into review, drill, practice, play, and instruction, according to the needs and interests of the group, the nature of the activity, and the purposes agreed upon.
6. Provide for participation in appropriate and supervised activities with pupils of opposite sex.
7. Provide, if possible, for participation in activities with pupils from other schools occasionally.
8. Incorporate a modified intramural program in the physical education program at appropriate school levels if this is the only way to provide this type of carry-over.
9. Guide the pupils in helping them select activities in which they are to participate so that the activities seem more meaningful and valuable to them.
10. Work toward 100 per cent spontaneous pupil participation throughout each period.
11. Eliminate some participation problems by permitting different groups in the class to participate under pupil leaders in different activities.
12. Stimulate reviews, drills, and practices so that pupils try to perform them correctly. Otherwise, the time devoted to them may be largely wasted.
13. Distribute skilled and unskilled participants in contests in

such a way that the activity is most challenging, enjoyable, and safe to the greatest number.

14. Provide a warm-up at the beginning and a cool-down at the close of the class period.

15. Provide for alternate leadership and followership in such a way that neither the individual nor the group unduly suffers and both benefit.

16. Provide, regardless of heterogeneous or homogeneous grouping, some opportunities for skilled participants to perform together, and for unskilled to perform with the skilled participants, not against them.

17. Keep in mind throughout the period and the year that the activity is the medium of physical education for educating the child.

18. Make practice periods long enough for profitable learning but short enough for maintaining interest and enthusiasm.

19. Make certain that the pupil understands the value of given drills when such drills are necessary.

20. Lead the pupil to experience a felt need keenly enough so that the result is self-directed practice, even outside of school hours.

21. Guide and lead the pupil to set up his objectives of the activity. Otherwise he is apt to participate aimlessly.

22. Keep in mind that most persons learn motor activities more by imitation than by verbal direction.

23. Avoid permitting pupils to practice long on a small isolated skill of an activity. Excellence of performance or *finesse*, for which limited amounts of this type of practice are prerequisite, is not an objective in most physical education classes.

24. Give brief instructions at beginning of each class period. Each pupil should know where he is to go and what he is to do.

25. Allow for individual differences in performance as pupils try to imitate the demonstration model and follow explanations.

26. Work for ease and relaxation of performance as pupils learn a new activity.

27. Avoid expecting the pupil to have speed, coordination, strength, and endurance all at the same time; or avoid expecting the pupil to show speed and coordination at the same time in a new activity.

28. Plan and conduct the activities so that the pupil's vital organs are well stimulated during the period.

29. Avoid pupil participation that leads to apparent excessive fatigue.

30. Keep in mind and be alert to the fact that pupils vary in the rapidity with which fatigue sets in.

31. Eliminate activities that are unjustifiably expensive in terms of space if the class is large or the available space small.

32. Utilize available "extra" spaces on the field or floor. Invent or modify activities that fit into such spaces.

33. Provide activities that lead up to the new activities.

34. Modify rules or content of an activity in order to make it better fit the group, the facilities, or the purposes of the activity.

35. Explain rules without unduly interfering with participation as appropriate situations arise during an activity.

36. Work toward the goal of enabling each pupil to be successful in achieving something worth while to him in each physical education period.

37. Help pupils check on the attainment of their self-selected objectives.

38. Make sure that first attempts in learning an activity will be reasonably successful, at the lower school levels at least.

39. Construct with aid of pupils tests to evaluate results of participation.

40. Enable each pupil to know his standing in any evaluated trait or ability at any appropriate time.

41. Diagnose errors in skill, knowledges, and conduct that are evidenced by the pupil.

42. Devote some time to "remedial" teaching, based upon diagnosis.

43. Help pupils discover a gradually ever-increasing number and degree of values to be gained from activities.

Principles of analysis. During participation the teacher is constantly analyzing. He is analyzing a sequence of skills. He is analyzing team-work between two men or among the team members. He is analyzing personal difficulties between two students. The reader is referred here to the section "The Practical Becomes Theoretical" in Chapter 2, page 41. What principles of analysis can be ferreted out of the discussion? What other principles of analysis can be devised? (*Note:* It is believed that the reader would profit considerably from this attempt to isolate and word as many principles of analysis as he can. The importance of analysis by the teacher is difficult to over-emphasize.)

Principles regarding sensory aids to teaching. As education has been drawn more closely to real life and away from academicism, greater importance has been placed upon activity. This emphasis has been accompanied by the recognition that teaching can be greatly facilitated and improved through the use of sensory aids. Some teachers and some fields have made use of these devices for years, but their full value has been appreciated by the school only within the present decade. At the present time visual aids are receiving recognition, but there are also other sensory aids that help learning through the kinaesthetic, tactile, taste, auditory, and olfactory senses.

Teachers of physical education as a group have been rather successful in making their teaching effective. Tradition has not kept them from seeing the value in providing a way of learning which enables the pupil to experience activities with all senses if possible and practicable. One reason we have continued to warn the young teacher against talking excessively is that too much of it devitalizes physical education. Excessive talking devitalizes because it robs the pupils of time and opportunities for more concrete experiences. Children do not like the "talking" part of physical education. Some help, guidance, and leadership are necessary, of course, if teaching is to facilitate learning. Sensory aids are clinching, gripping, realistic supplements to verbalization. It is one thing to tell a pupil: "The basketball is round." It is another thing to let him see a basketball. It is still another thing to let him feel, handle, and throw it.

One of the most outstanding contributions made during World War II was the use (and great expansion) of sensory aids in the improvement of learning. Athletic coaches long ago discovered the values of visual, tactile, and kinaesthetic aids in the improvement of rate of learning, retention, and understanding. While teachers of physical education have used some of these aids, still greater employment of them may improve their teaching.

Let us discuss, therefore, some of the principles that apply to this interesting area of teaching:

1. Make certain the sensory aid selected is appropriate to the skill, unit, or activity being taught.

2. Consider sensory aids as supplements to teaching, not as substitutes for teaching.

3. Avoid permitting enthusiasm for sensory aids to disrupt judgment as to the amount of time devoted to this part of teaching.

4. Use sensory aids for appropriate purposes. For example, use photographs and drawings for illustrations that will be needed several times, the blackboard for temporary illustrations, and the bulletin board for materials that are more permanent than either of the other two. Movies help in the analysis of skills as well as in the presentation of excellent performances of whole activities. Photographs are useful in illustrating such fundamentals as grip and stance.

5. Place sensory aids in appropriate places. For example, the movie film loses some of its teaching force when used in a room that is not dark and on a projection background that is unsuitable. The bulletin board should be placed in a spot where it is most apt to be noticed by pupils who have time to give attention to displayed materials. The blackboard should be placed so that sunlight glare is eliminated and so that pupils do not have to face the light as they look at the blackboard.

6. Keep sensory-aid devices in good condition. For example, movie projectors that break down, films that are so dry they break and crack, untidy bulletin boards, soiled drawings, phonograph machines that have deteriorated, and records that are cracked or worn out are illustrative of conditions that seriously detract from the effectiveness of sensory aids. Before any lesson in which a sensory aid is to be used, the teacher should test the equipment.

7. Select sensory aids that are related to the pupils' former experiences—experiences which represent the attainable to them.

8. Make certain the sensory aids selected clarify rather than complicate, facilitate rather than make more difficult, the learnings of the pupils.

9. Encourage pupils to make use of sensory aids to consolidate their own learnings and to express their ideas. The blackboard, drawings, sketches, diagrams, figures, and charts are examples of aids that can be used by pupils.

10. Select the most fundamental, most easily understood method first, when and if selecting between sensory aids and verbalization as the initial step in teaching. In many instances, a brief statement of the items worthy of the pupils' attention is given before using a sensory aid.

11. Check on the major learnings subsequent to the use of a sensory aid, not only to evaluate the scope, kind, and degree of pupil learning, but to evaluate the sensory aid itself.

12. Use the more permanent types of sensory aids such as moving pictures and photographs not only as immediate teaching devices but as ways of recording important activities of the year such as playdays, demonstrations, or exhibitions.

13. Integrate physical education with other activities, such as photography, drawing, making lantern slides, and lettering, by having pupils do the work. Let pupils help decide what aspects of the programs are worthy of being reproduced and retained for future use.

14. Avoid making the mistake of assuming that the use of sensory aids decreases the need for the effective application of the principles of presentation, explanation and demonstration.

15. Use a few excellent sensory aids in preference to many of fair quality.

16. Make full use of sensory aids for their various purposes. Sensory aids are used: (*a*) to present "model" performances, (*b*) to present a whole activity to beginners, (*c*) to present performances of unusual persons or teams from distant cities, (*d*) to provide concrete experiences, (*e*) to make learning more interesting through variety of teaching techniques, (*f*) to provide additional experiences to the pupil so as to enable him to draw conclusions better, (*g*) to save time, and (*h*) to gain and maintain attention.

A partial list of sensory aids includes: (1) providing opportunity for the pupil to touch, lift, grip, press, throw, push, and otherwise manipulate a piece of playing equipment; (2) providing opportunity for the pupil to hear, or to hear and see simultaneously, by means of such devices as radio, phonograph records, television, and sound movies; (3) providing opportunity for the pupil to visualize by means of such devices as silent movies, lantern slides, drawings, diagrams, photographs, stereoscopes, filmslides, opaque projector materials, and the blackboard; and (4) providing opportunity for the

pupil to engage in activity for the purposes of pupil demonstration, dramatization, pageants, making scrapbooks, notebooks, replicas, and the like, and taking hikes or educational trips.

THE NOVICE-OBSERVER OF THE EXPERIENCED TEACHER

The intending teacher often is—and should be—given opportunities to observe the experienced teacher at work. In any field of performance the beginner is helped by watching the experienced performer.

Attitude. The fundamental attitude of the novice in such observation is, "I can learn from this experience." Any attitude of an undergraduate major student that leads to his criticizing the experienced teacher is ill-advised. *First,* the major student lacks a background for such criticism. *Second,* incomplete information results from any but an adequately fair number of observations. Even so it is not uncommon for experienced supervisors to disagree in their evaluations of a teacher. *Third,* false conclusions are apt to result.

No point is being made that the experienced teacher sets a perfect example. But the undergraduate major student will be kept fully occupied observing the *activities* of the experienced teacher without attempting to determine the *quality* of the performance of these activities. Quality evaluation is the responsibility of the principal or supervisor.

Guides. Various formal guides are used currently to aid the novice in his task of teacher observation. Some of these guides are in the form of check-lists, some consist of lists of questions, and some are of the rating-scale type. The authors believe that many of these guides err on the side of lengthiness and complexity. A form which is so involved that the observer spends all of his time, attention, and energy attempting to follow the details of the form, shoots wide of the mark. It is the belief of the authors that there should be *adequate* opportunity for the observer to absorb, feel, sense, see, hear,

and reflect (even a little!) on the performance going on before him.

No single guide can cover *all* of the important details of teaching. No guide prepared for *general* use can anticipate the details that *this* novice should observe. If the leaders and experts knew for sure exactly all of the important details that go to make up successful teaching it would be more feasible to produce more good teachers.

It is suggested that if an observation sheet is used, it be limited to the larger areas or aspects that contribute to or are a part of teaching. Under each of these major categories can be listed a few illustrative questions which *this* novice will profit from observing and/or which relate to emphases being made by the teacher-trainer. This plan enables the observer to discover some things on-his-own, to have time to absorb and reflect, and yet be guided. Another advantage of the plan is that the observers will have many questions vital to them, to ask of the master-teacher.

It is suggested that guided observation of experienced teachers begin in the freshman year of professional education. The questions asked under the major categories will progress in difficulty and number as the major student progresses.

The following outline is rough and incomplete. The outline is suggestive at best. The four major categories are those which the authors believe are fundamental. The questions under each are solely illustrative.

I. *Personal traits*
   1. What desirable personal traits were shown particularly by this teacher?

II. *Class organization and management*
   1. What routines were in evidence?
   2. In what ways was the teacher ready for this lesson?
   3. How was the roll taken?

III. *Discipline and motivation*
   1. What incentives did you see used?

2. Were disciplinary measures necessary? If so, what were they?

IV. *Aim and objectives*

1. What were some of the new learnings? By what approximate proportion of the class?
2. What evidences did you observe that indicated accomplishments in improved attitudes?

Youth needs and teaching. Throughout the chapters in Part Six we have been discussing some principles of teaching physical education. This concentration is not without a possible disadvantage. Overconcern for pedagogy *per se* is apt to lead the unsuspecting teacher away from proper consideration of the pupil—the center of the good teacher's attention, effort, and interest. Principles of teaching, and the emergent activities of the teacher, reach their chief usefulness and valuableness neither in this textbook nor in the constancy or consistency of their application on the job. The selection of a principle and determining how to apply it, and, the selection of a teaching activity and how it is performed, depend on the local situation and the immediate problem or opportunity at hand. The truly vital part of a local situation and immediate problem or opportunity in teaching is *the pupil.*

For a good many years, teachers have been made very conscious of finding the interests of pupils. This quest still is important. The *needs* of pupils however are receiving more attention than they have for some time.[1] The Educational Policies Commission has presented "the ten imperative needs of youth." These may be thought of as bases for ten major objectives of the school in order that youth's imperative needs may be satisfied.

Objectives or purposes are powerful indicators of how teaching should be done. Each of the aspects of teaching we have been discussing in the pages of Part Six—explanation,

[1] Educational Policies Commission, *Planning for American Youth.* Washington, D. C.: National Association of Secondary School Principals, 1944.

demonstration, class management, the use of sensory aids, and so on—are performed differently as purposes vary. The way a teacher explains, if he wants only to impart knowledge about an activity, is different from the way he explains if he wants to help a pupil to develop a given attitude toward, or as a result of, the activity. He uses a given sensory aid in a certain way if he is assisting a pupil to acquire a skill, but uses the aid differently if his purpose is to help the pupil to acquire a certain appreciation about that skill.

The ten imperative needs of youth sharply bring to focus the attention of every high school teacher. These needs show ways that the teacher can be of great service to youth. These needs are the foundation of purposes toward which each high school "subject" can be directed. As far as physical education is concerned, substantial contributions can be made toward helping to satisfy some of the needs. Several of the needs indicate additional and new emphases that the physical education teacher can and should make. On the other hand, physical education can contribute little to satisfying some of the needs.

What do the following ten imperative needs suggest to the physical education teacher?

1. All youth need to develop salable skills and those understandings and attitudes that make the worker an intelligent and productive participant in economic life. To this end, most youth need supervised work experiences as well as education in the skills and knowledge of their occupation.
2. All youth need to develop and maintain good health and physical fitness.
3. All youth need to understand the rights and duties of the citizen of a democratic society, and to be diligent and competent in the performance of their obligations as members of the community and citizens of the state and nation.
4. All youth need to understand the significance of the family for the individual and society and the conditions conducive to successful family life.

5. All youth need to know how to purchase and use goods and services intelligently, understanding both the values received by the customer and the economic consequences of their acts.

6. All youth need to understand the methods of science, the influence of science on human life, and the main scientific facts concerning the nature of the world and of man.

7. All youth need opportunities to develop their capacities to appreciate beauty in literature, art, music, and nature.

8. All youth need to be able to use their leisure time well and to budget it wisely, balancing activities that yield satisfaction to the individual with those that are socially useful.

9. All youth need to develop respect for other persons, to grow in their insight into ethical values and principles, and to be able to live and work cooperatively with others.

10. All youth need to grow in their ability to think rationally, to express their thoughts clearly, and to read and listen with understanding.[2]

It is suggested that high school pupils can be helped and can be of help by having them figure out the personal applications of these needs. It also is suggested that teachers withhold any expression of inappropriateness to proposals of their pupils. The reaction of "inappropriateness" may come from one's being too closely tied to the orthodox, to one's own professional education or to *status quo*. Let us *permit* physical education to serve in new ways!

Procedure in Teaching a New Activity. The novice teacher often expresses a wish for a definite list of sequential steps for use in teaching a new activity. Such a list, of course, is impossible. No would-be list-maker can foresee at what moment it may be necessary to demonstrate, motivate, explain, and so on.

It may be helpful, however, to list some of the steps that should be taken at some stages in teaching a new activity. The first list presented below is that prepared by the authors. It should be regarded as incomplete; moreover, it is not presented in any particular sequence. The reader will see some

[2] *Ibid.*

fundamental similarities in the three different statements below regarding procedure in teaching a new activity.

INCOMPLETE PROCEDURE IN TEACHING A NEW ACTIVITY

1. Give background of lead-up activities.
2. Give some orientation in whole activity (presentation of movie or actual activity).
3. Secure and maintain attention of class.
4. Secure and maintain interest.
5. Set up necessary objectives.
6. Demonstrate; use sensory aids; make explanation.
7. Establish trials by pupil—reward correct efforts; make errors unpleasant.
8. Help pupil recognize and select correct responses.
9. Summarize general results of trials.
10. Continue use of incentives and guides.
11. Instigate further trials.
12. Discourage excitement and worry.
13. Avoid overemphasis on past learning.
14. Provide short practice on parts as necessary, relating them to whole.
15. Close class period leaving pupil wanting more.

STEPS IN LEARNING A MOTOR SKILL [2]

1. Goal exists (teacher helps define goal—motivates the acceptance of it).
   a. Must be perceived.
   b. Must be achievable and sometimes achieved.
   c. Must be worthwhile to student.
      Immediate and Distant.
      If not directly related to desire for learning, ulterior goals will appear.
      Points—awards—approval.
2. Demonstrate skill in total pattern (whole).
3. Total response on pupils' part (unless safety a factor—e.g., swimming).
4. Child sees what he has accomplished—sets up new and specific goal.
5. Teacher helps toward new goal by new elements to aid in in-

[2] From unpublished class notes of Dr. C. H. McCloy, University of Iowa.

sight—(Part) Movement, grip, rhythm, verbal cues, movie analysis, etc.

6. Clarify details of new complex pattern as it develops.

7. Motivate by approval—avoid making approval the goal.

8. Pacing—space rest and work to get best progress. (5 activities—1 each day! not good learning).

9. Set up conditions which demand maximum of work with minimum of errors.

10. Let student know his progress and when he reaches successive goals.

11. Direct generalization if transfer is desired.

12. Set up opportunities for satisfying use of skills which have been learned.

General Points

13. Consider individual differences in maturation in pacing.

14. Practice is important, but only if directed so that progressive improvement occurs.

15. Whole-part-whole best for separate skills as well as total game.

16. In practicing skills it is important that the skill be performed as it will be in the game situation—never violate the principle of the game.

17. Fundamental skills should be practiced to point of overlearning.

18. Do not teach opposing skills at the same time: e.g., tennis—badminton.

19. Teacher should have attitude of the coach—concern for best development of each individual.

STEP-BY-STEP TEACHING OF A NEW ACTIVITY [3]

There can be no set step by step procedure which can be followed precisely in teaching every new activity. The complexity of the total skills which constitute an activity, and the aptitude of the learner, will determine the nature of the method of instruction which should be employed. An activity which is, in its entirety, only a simple movement of such a low level of skill as to be considered practically as a reflex can be taught in only three or four steps. An example of a simple activity is opening a window using the legs while standing close to the window. Only three steps usually need to be employed in teaching this simple skill. First,

[3] From a manuscript copy of *Kinesiology*, by Laurence E. Morehouse and John M. Cooper, both of the University of Southern California.

motivation may be established by helping the individual to understand the economy of effort and the dangers of injury from using faulty body mechanics. Second, a brief rhetorical or visual description of the movement can be presented. Third, a practice trial of the complete activity may then be performed. The normal adult will probably not require any further instruction.

A complex activity such as the sprint crawl taught to a nonswimmer will require a greater number of steps and the content of each step will be different from those employed in teaching the simple activity. Motivation must extend over the entire learning period which is considerably lengthened in complex skills. The sprint crawl is much too intricate for the beginner to comprehend through a detailed description presented at one sitting. Instead, the complete stroke should be first described simply, then the separate elements should be divided into steps which are to be learned separately. Finally, the elements should be put together in the form of the complete sprint crawl and it should be practiced in its entirety. The division of the elements of the complex activity into steps which may be as numerous as a dozen should be taught in a sequence from the known to the unknown movements in a progression from the simple to the complex skills. Each step must be well motivated and practiced. The total number and the content of the steps required is dependent upon the aptitude of the learner and the complexity of the activity.

20.

Principles of Personal Integration

"In a democracy, the individual and his personality are of primary concern."

THE PERCENTAGE of maladjusted persons in the nation's population brought to the consciousness of the average person by World War II served to give pause to those teachers—including some physical educators—who avoided any responsibility for helping develop the human personality. In the present chapter, our concern is that of the prevention of an increase in the number of maladjustment cases and prevention of increase in the degree of maladjustment. While physical education teachers are not mental hygiene experts, any good teacher has much of the common sense and human understanding that form the basis of sound mental hygiene. An alert teacher becomes aware of the earlier stages of maladjustment, before professional attention is demanded.

For too long we have been concerned about bits of knowledge, skills and part-skills, and the establishment of a myriad of minutiae as habits. For too long we have not been concerned enough with whether the student could make sense of this patchwork, whether he could put the parts of the jig-saw puzzle together, whether the pieces actually could be fitted together, whether all necessary pieces were given to him, or whether it really mattered. There was great professional concern about *content* and, too frequently, an apparent disre-

gard of the *consequences* of this content upon the pupil. Is there an American teacher who takes the position that these matters are of no concern to him?

Sharp distinctions mark the concern of the educator of today when it is compared with that of his professional brother of yesterday. And it is little wonder. Certain facts and factors point directly and dramatically to the need for using the tools and forces of education in integrating, not disintegrating, the pupil's personality, and in furthering his integration in society. Let us consider a few of these facts and factors.

In spite of a higher standard of living, inventions for the pleasure and comfort of man, new ways of enjoying one's self, more and better social services, all that education has to offer, and a form of government that is most concerned with the welfare of the individual, Americans are said to be disintegrating in nervous stability. Personality disorders were a major cause of draft rejection and a major problem for the medical branch of the armed services of World War II. It is sufficient to mention only the large number of clinics and hospitals for the mentally sick, with the number available inadequate to meet the need. This fact with supporting data is common knowledge. The biological organism which we call *homo sapiens* has not changed perceptibly since its earthly origin if we accept the evidence from the Cro-Magnon days. This human organism, which developed to meet and adjust to the simple life and environment of that day, quite suddenly finds itself face to face with conditions and circumstances for which it is not adapted. The Industrial Revolution is closely related to a revolution within man's personality and within his social life.

Compared with the long stretch of time that measures man's development, it was but a moment ago that the biological organism found itself "restlessly speeding in motor cars from nowhere to nowhere"; fighting or dodging traffic whether it be Sunday or Monday instead of battling a prehistoric mon-

ster; receiving through an audition system built for the environment of 2,000 decades ago the wild, irritating confusion of sounds from streetcar wheels and bells, auto horns, grinding gears of trucks, tractors and steam shovels, the rat-ti-ti-tat of the rivet- and air-hammers, not to mention the crash and clatter of the steel on steel of the factory and mill. Urbanization has brought with it the chatter, laughter, and very presence of a great many persons all imposing and projecting themselves upon others. The devitalizing effects of daily meeting many persons, the hypertensions that accompany the necessary day-to-day adjustments to others, the great difficulty the individual has in shutting out the world for very long, are examples of the experiences of millions of Americans. The reader can easily supply others of the thousands of stimuli of our modern age that incessantly peck away at our nervous systems as these stimuli are absorbed by the senses. This fact in itself is bad enough, but then we tend to react by living at a tempo that the human organism was not made to stand for very long. This discussion is no pessimistic mirroring of contemporary life. The point is that modern civilization seems to keep us continually between an emotional shiver and a nervous sweat with little opportunity for that splendid serenity that marks the stable, integrated personality. Certainly the conduct of some of our physical education programs demonstrates that we have ignored the common-sense demand to counteract some of results of the rustle, rush, and run of this modern age.

Shall we now turn to another type of facts and factors that are related to the disintegration of man? In spite of advancement in technology with the resultant increase in human productivity, the decrease in working hours, the existence of plenty in goods and services, the increase of leisure; in spite of rapid transportation and the means for rapid distribution of goods; in spite of highly educated economists, sociologists, engineers, and scientists of various kinds with the benefit of

gadgets and processes with which to apply their advanced knowledge; in spite of the extension of the number of years of required schooling, the expansion of school services, and the liberalization of the school curriculum; in spite of all this and more, we do not feel secure. Many American youths with their parents do not face today and tomorrow with the steadying hand of hope, calm countenance of faith, or the zestful eye of enthusiasm.

What is education, what is physical education doing to make easier the ordinarily difficult task of "growing up" now made more difficult? What is education, what is physical education doing to help satisfy the personality needs, the integration needs, the emotional needs, the social needs of the offspring of the atomic age? Children may need organic vigor. In fact they do. They may need utility, safety, and recreational skills. In fact they do. But, if this is all that we teachers of physical education have to contribute toward helping youth face and solve some of today's pressing problems, we are as outmoded as the one-horse shay. Youth wishes for the respect of others, for success, for exercise of his capabilities, for security, for affection, for "belonging," for self-direction, for an optional balance between rest and activity, for faith in ultimate survival of the right, for being like others of the group in basic ways and yet an individual personality—in short, for *self-realization.* These physiological, social, and psychological needs of youth show the necessity for integration.

"Integration" is now a great educational shibboleth—a word which draws a laugh from "practical" people and a sneer from cynics. Yet psychiatrists know that it cannot be disregarded as an objective of education.[1]

If there is a need without further delay for herculean efforts

[1] Prescott, Daniel Alford, *Emotion and the Educative Process,* page 127. Washington, D. C.: American Council on Education, 1938.

toward this end, let us consider some of the beliefs of today that form a partial list of principles of integration:

1. "The condition of being integrated is primary." [2] The human organism reacts as a unitary whole. It is misleading to speak of a unified whole. Only a whole is integrated.

2. "Integratedness is a condition which exists only in terms of energy potentials distributed within a unitary whole in accordance with laws of energy behavior, known as laws of dynamics." The structure of the energy field of the human organism consists of a pattern of gradients. The mental life of the individual is governed by the same laws as govern physical and physiological growth. An integrated personality is governed by the same principles that govern an integrated physical being. In integration, no division is to be made between the mental and the physical.

3. ". . . the whole conditions or regulates the expenditure of energy, or the work done, by the parts. . . . Thus it is that specific modes of behavior in the individual are activities carried out by the whole individual in the course of preserving its unity and integratedness." The whole individual sanctions whatever is done by any of the parts, but the whole takes part in what is done.

4. "Wholes evolve as wholes. That is, integratedness is as complete at the beginning of the life of an organism as it is at any other time during its history. Development is not a process of building up integration; it is a process of preserving integration while it becomes structurally more complicated."

5. "Any whole is constantly renewing itself through a transposition process." [3] In the rehabilitation of a personality, old traits tend to be dropped and new ones taken on. In the meantime the unitary whole, the state of integration of the whole, is maintained even though the parts change.

6. "The evolution of a whole can be described as an exchange process going on between properties known, respectively, as *homogeneity* and *heterogeneity*." In primitive wholes such as are found in primitive human societies, we find the behavior of the part un-

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[2] Hopkins, L. Thomas, *Integration—Its Meaning and Application*, pages 43–48. New York: D. Appleton-Century Company, 1937. These nine principles are called "laws" by Hopkins and his collaborators. The present authors are responsible for any modifications they may make in the comments interpreting each law given by Hopkins.

[3] *Ibid.*

predictable although the whole remains integrated. In more complicated organisms we find heterogeneity of structure and homogeneity of action. The law of evolution from a primitive to a highly developed whole is a shift from heterogeneity to homogeneity of action of the parts of the whole.

7. "The activity of a part within a whole, no matter what the conditions, obeys the law of least action. The path of the motion (of the part) is the shortest possible path under the existing conditions."

8. This item refers to the principle of "maximum work." "All of the available potential energy of the whole will be expended in the direction of maintaining its integratedness, or, in other words, its *status quo*, in the presence of disturbances from outside. It follows from this law and that of least action (see 7, above) that, when the normally shortest path taken in the resolution of a tension is obstructed by a barrier of some kind, the path chosen will be the shortest possible under the new conditions." The behavior of the personality when it meets with thwarting circumstances is an example of least action and maximum work.[4]

9. This law is that of "configuration." "There is not a one-to-one correlation between a particular external stimulus or disturbance and the response of the affected whole. The whole responds relationally to a total situation; that is, the one disturbance in relation to other disturbances." The whole human organism reacts as a whole to all stimuli which are active at a given time, not just one strong and obvious stimulus. The familiar symbol "S-R" [5] misled the thinking of many teachers regarding the nature of, and caused them to underestimate the complexity of, the learning process.

These nine "laws of integration" may be used as a springboard to send us into an area where we come to closer grips with the problems and processes of integration. The following principles are worded in such a way that they indicate activities or matters of direct concern to the teacher.

10. The justification for rules, regulations, and other limitations of pupils' conduct is that pupils are benefited through being protected from injury, are enabled to enjoy their participation in activities, and

[4] *Ibid.*

[5] Stimulus-Response.

are enabled to realize other values of physical education impossible without such restrictions. The youth, therefore, should understand the purposes and values of limitations to his behavior in school. This understanding helps prevent his feeling that the school and the teacher are trying to thwart the accomplishment of his purposes, the realization of his desires. It is most advantageous to secure the cooperative effort of pupils in discovering the need for and wording of necessary rules and regulations not only because of increased conformance to rules by pupils but because such cooperative and creative participation provides one means of aiding the integration of the pupils' personalities into a social group.

11. The individual attempts to attain selfhood, to gain his purposes, to reach self-set goals, in spite of the obstacles set by his environment and his biological heritage. The extent to which a youth will go to satisfy a desire, such as to be recognized, noticed, liked, and respected by members or a member of his group, is sometimes remarkable, amusing, tragic, or shocking.

12. Most children are integrated personalities when they go to school. The task of most of us as teachers is to discontinue certain practices that tend to disintegrate the child and to adopt other practices that tend to maintain and promote continued integration.

13. The teacher should help the pupil understand himself and find himself in his social group and life.

14. The teacher should be aware of and ready to help the pupil who is attempting to make adjustments to problems and obstacles too great for him to solve and surmount. In the same breath, it is to be added that the teacher refrains from assigning projects, tasks, and performances beyond the ability of a pupil. The school and the teacher do not educate. They do all they can to make education possible, but the pupil is the one who educates himself. The challenge to and enjoyment for the pupil in meeting and solving problems are eliminated when the teacher assigns too difficult a task. The child feels thwarted and frustrated. To maintain a feeling of integration within himself, the child adopts some behavior (often "misbehavior") which helps him keep a balance between tensions and releases, instabilities and stabilities.

15. The teacher should aid and provide opportunities for each child to develop and mature in his emotional actions and reactions.

16. The pupil should be guided to examine discriminately his system of values and should be led to raise them to higher levels—in fact,

to find out what these higher levels are. The pupil should grow in ability to re-examine his system of values as he gains experience.

17. The average child tries to do all that is necessary to be able to think well of himself, to feel that he is worthy of his classmates, to believe that they think well of him and that they expect something of him, to try to measure up to what he thinks these expectations are.

18. When a pupil fails in his attempt at successful performance in an activity, the teacher should help him assume a mature attitude toward the failure. If the child seeks to be successful in some other project as an escape from and a substitute for the failed performance, as he attempts to maintain integration, the teacher should aid him in being successful in the substitute performance and should also appropriately guide him back to tackle the original task, if he gives promise of being successful after conscientious and intelligent effort.

19. The pupil should be given opportunities to develop and follow ideals, loyalties, and other appropriate aspects of the aesthetics of life.

20. The pupil should be aided in appreciating his strengths and weaknesses as well as the limitations and advantages of his environment. The pupil transferring from another school often becomes maladjusted because the new environment sets limitations and demands which he does not recognize or sense. A pupil must learn to survey and appraise a situation and a group to know what is required to adjust to them.

21. The teacher should be alert to and guard against expression of his own personal tensions, instabilities, or maladjustments so that they will not be projected to the members of his classes. This restraint is not easy because some symptoms of maladjustment in one's conduct persist undiscovered and unexamined. Furthermore, even if such instabilities are discovered, the teacher is apt to excuse them as being justified. The teacher who fails to receive a promised raise in salary becomes disgruntled. The innocent but indiscreet teacher who is "talked about" rebels, suffers a persecution complex, or enjoys an orgy of feeling sorry for himself. These states are unfortunate enough in themselves but become serious, socially and educationally objectionable faults if imposed, either consciously or inadvertently, upon the pupils.

22. The teacher should help the pupil in knowing when and how to adjust to others and to his environment, and when and how to take the initiative in pursuing his purposes. One of the major lessons in adjustment is to learn when to "give" and when to "take."

23. When a pupil is facing a serious adjustment problem as, for example, pumping up a deflated ego, he is apt to be oblivious to the accomplishment of other tasks. The youth who has been turned down by his sweetheart may even fail to take care of his nourishment needs. The athlete or student who is intensely worried over finances usually fails to measure up in his respective specialty. Such adjustment problems may cause the pupil to engage in antisocial conduct, apparently ignore the pressing needs of school situations, break the rules of the school, and the like. That is, when the pupil is unable to fulfill a cherished desire common to persons of his age, he either rebels or tries to balance the tension by compensative behavior of some kind.

24. The teacher should make certain that, as the program progresses through the year and from year to year, the pupil is prepared to cope with the new. This not only facilitates the learning process but helps avoid unnecessary experiences in and feelings of failure with resultant disintegration. Obviously some failures are expected as a part of development. When they occur, the teacher's task may be to help the pupil in finding or developing new approaches or techniques to overcome or get around failure and achieve some successes.

25. The pupil should be led to appreciate his dependence upon the other members of an athletic team, other members of his class, the school staff, his home relationships, the members of the community and their respective enterprises as contributive to the welfare of the individual; in fact, his dependence upon persons hundreds and thousands of miles away. This appreciation not only helps him better understand his world but helps him arrive at that point of maturity when the center of the universe is visualized at some other place than within himself. Such appreciations help the pupil in understanding the vast scope and significance of "society," tend to help him be more willing to adjust to the social order, to be more intelligent in adjusting to and being a part of his social group.

26. Some teachers work in communities that provide types of environment that "breed" maladjusted children. If such conditions prevail, the teacher must understand the causes of disintegration, do what he can to maintain integration, cooperate with the school administration in controlling conduct, and do what he can to improve conditions.

27. One of the first steps taken by the teacher in promoting the integrated personality is to make as certain as is possible, by means

of a health examination, the health status of the individual. A related step is to adopt measures that will prevent conditions and circumstances that may be injurious to the pupil's health. A third basic step is to carry out all possible procedures in remedying or correcting conditions, found during the health examination, that are deleterious to the child's health.

28. The pupil must be made to feel confidence in himself and his system of regulating his inner life. He may need some help in establishing and working out a system so he is justified in being self-confident.

29. The teacher should be alert to and adopt measures to find pupils' talents. He should provide outlets for creative abilities. There is no reason why pupils cannot receive the satisfaction of creating new rules for games, new games with familiar equipment. If we had listened to pupils, we would have introduced long ago such innovations as smaller-sized basketballs and footballs for the later grades in elementary school and earlier grades in junior high school, lower goals for basketball in the junior high school, and a baseball one could catch comfortably without a glove (softball).

30. Efforts should be made as early as nursery-school age to develop cooperation with others and to develop other social traits as opportunities present themselves or are made. By the time the pupil is a senior graduating from high school, he should be a young adult in social maturity and stability. We teachers of physical education as a group have not contributed toward such a goal in proportion to the opportunities provided in physical education. Regardless of "essential skills," "fundamental skills," and "basic activities," an important obligation of physical education is to join education in the development of personality and character. An integrated personality is dependent upon the ability to deal intelligently with problems involving social *adjustments*. We cannot begin this development too early in physical education.

31. Teachers should avoid establishing too many codes of conduct. There is much sense and contribution to integration if opportunities are provided for the individual and the group to pursue modes of action which are best for them in the long run, regardless of the teacher's need for expediency.

32. Backward, clumsy children should be given more opportunities than other children to realize success and to achieve in physical education activities.

33. Pupils who are highly skilled and well coordinated should be

presented with activity situations and skills that are extremely challenging, or given other challenging tasks, such as trying to be successful activity leaders or squad leaders.

34. Physical education for high school seniors (and perhaps some juniors) should be planned chiefly by them in terms of their life needs now and next year, as well as in terms of their interests. Physical education takes on meaning and value to these young persons if it is seen in relationship to "grownup" life, as a means of "belonging" to a local community, or as needed for their life in a college community. Physical education should satisfy the actual social and personality needs as well as the biological needs of any pupil if we are to contribute to the individual's integration.

35. The teacher of physical education should cooperate with other teachers in aiding the pupil to view his life as a set of unified experiences and, if they are not unified, to help him find ways of accomplishing an optimum degree of integration.

36. If physical education is to be functional in pupils' lives, meaningful to them, of value of them, it must match their interests, or help them develop their interests so that they enjoy the better type of physical education program.

37. The teacher, who is interested in helping a pupil continue to be an integrated personality, does not try to eliminate all obstacles and problems in the pupil's pathway. The teacher does not try to eliminate failure from the child's life and experience. Rather, the teacher tries to prevent failures and thwartings from occurring too often, continuing for too long a period, being too large or difficult to surmount or solve. We learn through failures, dilemmas, and disturbances as well as through their opposites. We attain integration momentarily by adjusting. We learn to adjust by adjusting. We prepare ourselves for future adjustments by seeing the necessity for adjustment, by having varied experiences in adjusting, by developing originality and initiative in solving our adjustment problems, and by taking the responsibility for the consequences of our attempts at adjustment and for the "tools" we selected and used for the adjustment process. The teacher therefore aids the pupil in solving adjustment problems; helps him to develop self-reliance in meeting, overcoming, or getting around obstacles; and helps him in meeting the uncertain future, its problems and difficulties, with confidence.

38. Teachers should find the type of pupil whose ambitions overshoot his abilities. Such a disjointed condition means maladjust-

ment whenever, wherever, and as long as it exists. The substitution or sublimation process usually should be gradual and imperceptible so that further disintegration is avoided.

39. The pupil should be led to appreciate the place of his wishes and interests in relation to those of his group and those of larger units of society. He should understand that most of his wishes are fulfilled and his interests satisfied chiefly through cooperation of the group.

40. Feelings of happiness, satisfaction, and joy are essential to the integrated personality.

41. The teacher should use available means of determining the present status of the child's maturity as well as his rate of maturing. Differences in degree and rate of maturation form the seat of some disintegrations, particularly if the teacher fails to adjust appropriately the program and the teaching.

42. Pupils desire to be appreciated and wanted by others.

43. The teacher should find out the types of needs and cherished wishes among his pupils and try to satisfy them. The reticent, backward girl needs to participate in social situations. The weak, underdeveloped boy that anyone can brush aside needs to participate in strength-building activities. The clumsy child should be helped to become as skillful as possible in appropriate activities.

44. The pupil should be given opportunities for discovering, for adventuring, for meeting situations that demand courage and ingenuity. Teachers who were denied a normal childhood or who have forgotten it tend to lay the pallid hands of restraint, caution, "safety-first," and conservatism upon the activities of adventure-hungry boys and girls.

45. Children should be given opportunities to gain distinction while at the same time they are like others in basic respects. One way for them to gain these desired differences is through being permitted to make decisions and selections, to be as self-directive as their maturity and the circumstances indicate. This is fundamental to an integrated personality and demands a teacher who can judge the maturity of pupil regardless of age.

46. A sense of security, another essential of integration, is partially attained through making certain that the pupil knows what the school and the teacher expect of him. This statement refers to type of work, quality, amount, the speed at which one is expected to work, and ways of attacking the work. This principle does not preclude the pupil's taking part in planning his work; rather, the

teacher guides the pupil's estimates, standards, and judgments as he participates in planning.

47. A pupil sometimes becomes extremely interested in a given activity. His interest may become so deep and enveloping that he is thoroughly absorbed in what he is doing. At such times he attains an integrated personality—he is "at one" with the world and himself. Such centers of integration tend to change from one activity to another. The teacher should guide the pupil in not becoming too deeply engrossed and fixed in one center for too long a period if this participation does not lead to further and higher activities. This principle is based on the assumption that a balanced, well-rounded personality is a worth-while goal. Furthermore, if a child is limited to one center of integration, he is due for a severe and disintegrating shock if this center of his interest and attention is suddenly removed. The old adage, "Don't put all of your eggs in one basket," takes on meaning in any discussion of integration.

48. The teacher should do what he can to secure the pupils' cooperation in attempting to make the authority of the class and the school assimilable and agreeable to the individual. When this condition does not prevail the individual becomes disintegrated. His resulting behavior upsets the equilibrium of the environment which is at best delicately poised between balance and unbalance.

49. The teacher should set an example to pupils by the ways he adjusts to life's tensions, instabilities, and obstacles.

50. The teacher, alone, should not tackle the task of preventing or remedying maladjustment. Rather, the aid of other teachers, the other school personnel, the community, and the home, should be secured. If these other sources of influence are lacking, the lone teacher should not give up. He can accomplish something. In fact, if the pupil has but one person whom he trusts, whom he believes understands and likes him, and in whom he can confide, he may be prevented from becoming dangerously maladjusted—if he does not become too dependent on one person.

SAMPLE TEST ITEMS

True-False

1. Before introducing a new activity-to-be-learned, the teacher should find out in great detail the ability of each pupil in the new activity.

2. Before participating in a new activity, pupils should be encouraged to ask many questions.

3. All teacher-demonstrations of skills have the same purpose.
4. Only the teacher should demonstrate skills-to-be-learned.
5. All explanations of the teacher have the same purpose.
6. Explanations of skill performance should be detailed and comprehensive.
7. Teachers should participate in activities to the same degree as their pupils.
8. The children of a class should have equal amounts of participation.
9. Sensory aids will, in time, replace teaching.
10. All sensory aids serve the same purpose.
11. The more sensory aids a teacher uses, the better his teaching is.
12. Integration is related to man's evolution.
13. Man's nervous system is biologically adjusted to modern civilization.
14. Integration is more preached than practiced in physical education classes.
15. Every child is fully integrated before he goes to school.

PART VI REVIEW TEST ITEMS

Completion

1. The teacher should be prepared for each class from ..... to ..... .
2. The physical education teacher should have more than one physical education ....
3. The teacher should ..... before his class in a physical education ..... .
4. The teacher should maintain a becoming ..... .
5. The modern educator should be careful of his appearance on occasions ..... in physical education classes.
6. The development of desirable traits of teachers should begin at least .... and preferably before.
7. According to the rank-list of teacher traits (Commonwealth Study), breadth of interest ranks first in grades ..... , adaptability ranks first in .... , and considerateness ranks first in grades ....
8. ..... give the teacher the inner feelings of confidence, friendliness, poise, and the appearance of possessing these traits.
9. Before the teacher faces his first class he should find out the ..... of the school.

10. An inseparable part of preparing the tentative program is for the teacher to possess ..... of, and ..... in the activities planned for each class.

11. No one can predict the modifications and refinements in teaching techniques that will be necessary after the class begins, but the teacher can be prepared in basic .....

12. The gymnasium should be arranged so that it is free from ..... and ..... to misconduct.

13. The teacher should ascertain before school starts the exact amount of ..... he has to ..... for physical education.

14. As a rule, the climax-achievement of every great man is preceded by .....

15. Whatever the system of attendance taking, the principle is that it should be (1) , (2) , and (3) .

16. Class organization and functioning is believed by many teachers to be facilitated if each pupil is placed in a definite .....

17. It has been estimated that only ..... per cent of the pupils receive individual attention in the average physical education class.

18. The inventive teacher changes the rules and content of activities to fit available .....

19. The period should be planned so that activities near the close of the period are ..... than those offered during the main part of the period.

20. Whether or not the pupil experiences "adventure" in physical education is largely dependent upon the teacher's .....

21. Stored supplies should be periodically .....

22. The daily program should be arranged so that there is an appropriate balance between instruction ....., ..., ..., and review.

23. Whether to accept excuses for a child's nonparticipation in physical education is a problem for the .... to solve.

Yes-No

1. Are some teacher-imposed rules and regulations necessary in the elementary school?

2. As a general rule, is it advisable to have the pupils participate in making the plans for class organization and conduct?

3. Is it advisable to have the pupils understand the advantages of a routinized procedure?

4. Should the physical education teacher be formal and somewhat "distant" with the school janitors?

5. Should pupil leaders be elected (or appointed) as early in the year as feasible?

6. Is "being respected as a teacher," by pupils, more important than "being liked" by pupils?

7. Is play a waste of time?

8. Do regulations help a crowd exercise self-control?

9. Should the side boundary lines on a tennis court run north and south?

10. Should the baseball diamond be laid out so that the pitcher, when throwing the ball across home plate, will be throwing northwest?

11. Is it advisable to plan systematically the pupils' activity for such time as they spend in the locker room?

12. Should the time for pupils' dressing in locker rooms be as short as is at all practical?

13. Do most teachers of physical education utilize practically all of the available floor space?

14. Should the teacher of physical education assume the responsibility for accident prevention in physical education classes?

15. Should the physical education teacher include ability to relax as one of the objectives of his program?

16. Is it highly desirable that pupils in the adaptive program should be scheduled so that they do not appear during the regular physical education program?

17. Is the major purpose of physical education the integration of pupil personality?

18. Are interests and enjoyments learned?

19. Are incentives internal stimuli?

20. Are we naturally lazy?

21. Does an organic drive, unmodified by learning, have direction toward specific types of activity?

22. Does integration imply that drives have acquired direction toward tension-releasing activity?

23. Are we born with our interests?

24. May a mild degree of hunger be an aid to learning activities not directly related to food-getting?

25. Do we decrease our normal amount of energy production by habits of vigorous activity?

26. Does attained pleasure always decrease the immediate drive toward attainment of that pleasure?

27. Are satisfaction, equilibrium, and complacency conducive to learning?

28. Are competition and rivalry the most worth-while types of incentives?

29. Does continued failure at a learning problem stir one to prodigious efforts to solve that problem?

30. Does *purpose* imply preplanned goals?

31. Is there any place in education for constraint and forced obedience?

32. Is self-discipline best learned without external restraint?

33. Are attitudes toward physical education more important than present specific skill acquirement?

34. Should the teacher acquire disciplinary techniques for application in general?

35. Should the pupil's excess energy be repressed?

36. Are negativism and rebellion in pupils the probable resultants of "easy-going" and lax discipline?

37. Does an incentive act by itself?

38. Do the less successful pupils need more criticism and rebuke than the superior?

39. Should incentives always be applied singly?

40. In general, is integration fostered by relative grading, rivalry, and awards?

41. Whenever a teacher complains about "having a class of blockheads," is it rather certain that the teacher either has not mastered the elements of teaching, or that he is expecting too much from the pupils?

42. Is a social disposition one of the most desirable traits in the junior high school teacher?

43. Do most teachers talk too much during the class period?

44. Is the gist of good Health teaching the requiring and checking of the pupil's careful study of a textbook?

45. If the teacher is securing careful preparation for his work, may he disregard the objectives without impairing his work to any great extent?

46. Does learning with a comprehended and approved purpose increase the amount retained?

47. Should the best pupils do the major part of the performing during the activity period?

48. Should the teacher making an activity assignment answer the question *Why* in regard to the assignment?

49. Can pupils get notes, outlines, or directions most economically by teacher dictation?

50. Should backward pupils be excused from participating?

51. Should high school activities be modeled after college activities whenever possible in order to prepare the pupil for college activities?

52. Should the practice teacher be rated lower in teaching ability if she fails to improve, when possible, the classroom environment?

53. May the teachers bluff frequently without the pupils suspecting them of so doing?

54. Should the temperature of the gymnasium be about the same as that of the classrooms?

VII.

How Do We Determine Improvement?

21.

Measurement and Evaluation in Teaching

"For he that reads but Mathematicke rules
Shall find conclusions that avail to work
Wonders that passe the common sense of men."
—ROBERT GREEN, 1594

"It is quite comfortable to me that experiment need not quail before mathematics but is quite competent to rival it in discovery."—FARADAY

MOST undergraduate students preparing to be teachers of physical education are required to take a course in tests and measurements. This present chapter in no way is a substitute for that course. Rather, we are about to make a critical approach to measurement and evaluation.

Before beginning this critical discussion, the authors wish to make their position clear as to the importance of measurement and evaluation in physical education. If the teacher fails to perform these functions, how does he know to what degree, when, and whether or not objectives are accomplished by the individual pupil, the class, or the entire student population? Without the facts and information that come from testing and appraising, how does the teacher know what emphases to make or change in program and in teaching? Of all the reasons for testing and evaluating in physical education, the one mentioned above is the most fundamental.

There was an excuse a few decades ago for teachers to

use the "hunch-guess" method of determining what physical education did for the pupil, with the pupil, and to the pupil. Today, no valid excuse remains for our hoping, wishing, or taking for granted without *making as sure as possible* of the facts.

This point is emphasized at the outset of this chapter for two reasons. First, a few persons who read the following critical approach might gain the impression that the authors are skeptical of the value of testing and evaluation. Second, there are too many comments from educational administrators to the effect that physical education would be doing an excellent job if it only accomplished that which it enthusiastically *claims*. There is but one way to answer that criticism satisfactorily.

A CRITICAL APPROACH

Superficial skimming of this chapter will not yield the authors' views of measurement and evaluation. Tests and measurements as a process in education and particularly in physical education are frankly criticized in the first part of the chapter. Attention is then directed to evaluation as distinct from measurement. Measurement in physical education is then considered, followed by a discussion of marking or grading.

As we discuss this first part, let us keep in mind that it is not only a *critical* approach but a critical *approach.* Every teacher interested in the better teaching of physical education desires to face the claimed weaknesses, disadvantages, abuses, and misuses of measurement, as well as the claimed values, advantages, and uses. We are reaching, therefore, toward more facts about measurement, rather than being content with partial facts which are frequently deemed sufficient for the teacher's eyes and ears.

Physical educators—leaders in modern educational philos-

ophies. Teachers of physical education have been practicing for years what many others are just beginning to talk about —namely, such procedures, programs, and concepts as "the play way," "the activity curriculum," "the whole child," and "learning by doing and through experience." These new guests in education's household are still so little known and understood that some school administrators and academic teachers hold themselves aloof. There seems no question that, generally speaking, school education is still educating minds instead of educating persons. School education in most areas is still attempting to duplicate life ("education is life") by means of such passive techniques as reading and listening. The purpose of this discussion is not the criticism of educators whose educational philosophies rest upon the concepts of the Schoolmen of the Middle Ages, erudition instead of functional wisdom. Rather, it is a definite pointing out that physical educators have been and are leaders and pioneers in certain educational movements.

We physical educators, however, must admit in passing that during the years when we were almost the sole users of such new educational concepts as are mentioned above, we did not *develop* and *sell* these ideas. It is significant that educationalists, school administrators, and academic teachers who only now are adopting these new concepts as bases for practice seldom ask for guidance, help, or suggestions from us. Apparently, through the years of practicing these now-modern educational movements, we failed to analyze sufficiently what we were doing and failed to draw adequate, reliable generalizations from our experiences.

Physical educators—laggards in tests and measurements? There are aspects of education in which physical educators are leaders, but the field of tests and measurements is not one of them. In spite of the early tests of strength and physical dimensions and the irregular appearance of testing devices for

physical education since the middle of the nineteenth century, we have not kept abreast of the testing movement in education. At the present time, some of us seem to be so busy following the laggards in the educational test parade that we appear to be unaware of the fact that the parade leaders made an abrupt turn a decade or more ago.

"Unscientific" influences. Attempts to belittle, thwart, and stifle such qualities as *wholesome skepticism, avid curiosity, determined truth-seeking,* and *courageous experimentation* defeat the very essence of the scientific spirit and attitude. As Huxley states the proposition: "Science commits suicide when it adopts a creed." When the movement of tests and measurements in physical education fails to foster the scientific attitude *toward itself,* such a movement destroys the very force that created it.

This discussion is no attack on imaginary malpractices. Let us listen to those test enthusiasts who argue that test-making should be left to the experts, in the same manner that we entrust our automobile, our radio, and our clothes to expert handling. One statement runs: "No, I would not advise any of you to experiment with tests. It is difficult enough for men trained in the science (*sic*) of test-making to construct standardized tests, much less you who are so untrained. It is better to do no testing at all than to use subjective (*sic*) tests such as any but the experts would make. . . ."

A "scientific" influence. In contrast to this type of "professional guidance" is a suggestion from a well-known maker of tests of physical education,

> . . . Second, he [the teacher] should study his own local situation and ask himself what information he wants or can well utilize in order that he may do better teaching. Third, experiment; and in the experimentation, be sure that the results are utilized—not just filed. A few years of such experimentation will enable one to determine what tests will contribute to the efficiency of teaching, and

which ones may be left entirely to the research worker.[1] [And which ones should be discarded.]

Objectivity vs. subjectivity. Some pseudo-experts on testing who have managed to reach the ears of teachers of physical education have attempted to give the word "objectivity," in connection with tests and data, a sort of "approved" status. At the same time they use the word "subjectivity" with derision. Have we reached the point where it is possible to silence a teacher merely by labeling his proposal for a marking plan, for example, as "subjective"? The fact of the matter is that tests and measurements are shot through with subjectivity. The content of all tests is subjectively determined. The selection of a given test to use for marking, classification, or other purposes is a subjective process. The administration of a test is a subjective procedure. The taking of a test by the pupil is subjective. The recording of the test data is open to human frailties. The interpretation of data and drawing of conclusions are subjective. Someone has to decide the action that is to be taken after conclusions are drawn, and this obviously is a subjective process.

It is therefore usually more accurate to speak of degrees of subjectivity with reference to tests and test data than to pretend that some tests are the essense of objectivity. Objectivity in tests usually refers to scoring only. No one would question the desirability of each teacher's attempting to decrease subjectivity as much as possible with regard to tests and measurements, but there is no reason to let the accusation of "subjectivity" muddle one's clarity of thinking or observation. If one permits his attention to be too confined to a concern over the matter of "objectivity" of testing, he may not be alert to the limitations of the resulting data, sensitive

[1] McCloy, C. H., "The Future of Tests and Measurements in Physical Education," page 56, *The Journal of Health and Physical Education*, Vol. XI, No. 1 (January, 1940).

to possible misapplications of statistical techniques, and awake to exaggerated claims for testing in general or some tests in particular.

Regarding "objective" tests, the teacher will be interested in a statement by Monroe and Engelhart: [2]

> The widespread use of objective tests by teachers is undoubtedly contributing much to setting objectives towards which students direct their efforts. The condition is probably making the tests increasingly less valid as measures of the desired achievement.

In speaking of quantitative measurement, Brubacher writes: [3]

> The imminent danger here is that, if one only measures what can be measured, teachers will teach that which can be measured, namely the facts and skills that can be isolated.

A given test of physical education may have its claims for being "objective," but the alert teacher desires to know: "What is the purpose of this test?" "Of what value is it?" "Of what value to the pupil, now and later, are the test items?" Are these questions too severe a subjective test of "objective" tests? Perhaps! But answers to these questions will go far toward preventing teachers from attempting to build whole programs of physical education based upon test items; from directing our teaching toward the accomplishment of only the trivia and minutiae resulting from one, two, or three, "objective" tests in physical education.

Validity—actual or implied? The test maker, after selecting a supposedly existent trait to measure, sometimes assumes (1) that he is in possession of an adequate knowledge of the simplicity or complexity of the trait, (2) that responsible persons agree with his understanding and diagnosis of the nature

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[2] From Monroe, Walter S., and Engelhart, Max D., *The Scientific Study of Educational Problems*, page 174 (1936). By permission of The Macmillan Company, publishers.

[3] Brubacher, John S., *Modern Philosophies of Education*, page 272. New York: McGraw-Hill Book Company, Inc., 1939.

and content of the trait, (3) that a testing device will measure this trait, (4) that the items of the test represent measurable uniform units or increments, (5) that limited experimentation will or will not *prove* that this device actually measures the trait, and (6) that the remaining statistical maneuverings used in standardizing a test are sufficient to launch a test upon the market. The mere listing of some of these tasks and danger signals cannot help but stimulate respect for the test maker who devises an acceptable standardized test. But most such tests are useful to teachers because of their aid in avoiding objectionable degrees of subjectivity and in their reliability. This leaves the question of the validity of a test unanswered.

No one knows better than the genuine test expert that no amount of statistical juggling increases the actual validity of a test. The attempt to show statistical validity by means of computing a correlation between the scores of the new test and those of an established test is unacceptable because the established test is also subject to the question, "Precisely what trait or traits does this test *actually* measure?" That is, eventually and invariably we end by having to admit that the original test consists of someone's ideas of the factors of a trait or ability and how it can be measured. It is rather significant that the validity ratings of the Stanford-Binet intelligence test, as a test of *native* intelligence, have been greatly decreased in these latter years [4] when educators are more wholesomely skeptical of and circumspect of tests and claims for the values of tests.

Let us illustrate the care with which one must consider the question of a test's validity. It seems reasonable to assume that a teacher would desire a test actually to measure what it purports to measure if he were going to use it. Shall we suppose that we wish to devise a test for measuring physical condition? First of all, we will have to assume that physical

[4] Kelley, Truman Lee, *Scientific Method*, page 88. New York: The Macmillan Company. 1932.

condition can be isolated for measurement. We will probably agree that we must have several items in the test or have a battery of tests, since it is generally agreed that physical condition is a multifold trait. In fact, thirty-five nationally known physiologists, and also leaders in physical education who are doctors of medicine, reported the following factors as the essential constituents of physical condition: age; heredity; native capacity; family history; case history; somatic health; nutrition—accessory food factors, biochemistry; emotional factors; reaction time; speed; strength; muscle tone; endurance; susceptibility to fatigue; respiratory efficiency; perspiratory efficiency; weight—in relation to height, width, stability, build; distribution of weight; work output per pound; cardiac condition—pulse ratio, cardiovascular adaptation, size of heart, pulse variation, pulse change, return to normal, critical pulse, rise in systolic B.P., minute volume of heart, amount of hemoglobin, blood pressure, amount of buffers, pulse rate, chemical condition of blood, hemopeitic mechanism, alkaline reserve of blood; indices that the whole organism is geared together for best functioning; freedom from structural and functional disorders—compensation, adaptability, resistance to disease; good functioning of the endocrine glands; good functioning of the sympathetic nervous system; normal basic metabolism; skin; eyes; hair; teeth and gums; arches of feet; lack of obesity; proper functioning of sense organs; neuro-muscular control; subjective sense of well-being; attention and alertness; morale and zest; good functioning of the digestive processes; posture.

It therefore appears that physical condition has a good many component factors and some of them may seem to appear to be capable of being isolated for measurement. If some factors are isolable, we may be able to apply quantitative measurement to them and get some valid results. The trouble is that the factors are interrelated. Consequently, we have a large number of factors, some isolable and

some not, and all of them seem to be interrelated. Does it not become increasingly difficult to devise a valid test of any one factor? In fact, is it possible?

The point might be made that one reason there were so many factors listed by the physiologists and physicians may be because the term "physical condition" probably does not have similar meanings to these men. This fact poses rather interesting questions: What degree of agreement can we expect to get from a representative sampling of physical educators as to the precise nature of any of the traits or factors we test and measure in physical education? What degree of agreement would we expect to get as to how any one of these traits or factors could best be measured? How many of these physical educators would agree as to need or value of testing any one trait, or set of traits?

We speak rather glibly of such a factor as strength and are rather confident of our devices for measuring it. Increased knowledge of strength yields complexity rather than simplicity to our understanding of it. Our present devices for measuring strength obviously were invented and are applied on the assumption that it is less complex than present physiological and psychological facts indicate. These devices assume that strength is best shown only in certain ways.

It is difficult to find agreement among one's colleagues as to the *precise* meanings of many of the traits or factors which we optimistically attempt to measure. If there is little agreement among experts as to precisely what a given factor such as strength is, how do we know what to attempt to measure, or when it has been measured? Coupled with such questions is another, suggested by the paragraph above: Do we not find upon continued and more careful analyses of a trait which we assume exists and can be measured that, even though we began by "knowing" the trait, it becomes increasingly complex and begins to involve other traits, most of which are not now measurable? If this is true of a factor such as strength, how

much more is it true of a still more complex something called "physical condition"? It is to be emphasized that the present devices for measuring strength obviously are based upon someone's ideas of strength, someone's ideas of how it is expressed, and someone's ideas of how this expression can be harnessed and measured. Does not the same hold true for physical condition and the other traits which we assume can be isolated?

We may secure records of some of the reactions to stimuli of the human organism, but whether or not these activity phenomena are expressions of an isolated human trait or factor is seriously questioned. Merely to measure some reaction of the human being to a stimulus does not mean that man is made up of isolable, measurable variables.

Any discussion of the validity of tests would be incomplete without calling to mind the ever-changing nature of the human organism. One of the difficulties of attempting to apply the type of techniques used in the physical sciences to education is that the "basic elements" in the latter field change. Another difficulty of this attempt is that predictions of a human being's precise reactions to a given stimulus are highly fallible. There seems little doubt that:

> By the time one gets to the end of measuring a child's achievement, one will find that the child has already changed in some aspects of what has already been measured. The one administering the test cannot measure fast enough, for the test itself seems to do something to alter the very child being measured.[5]

Another reason a test may lack the validity claimed for it is that the test deviser, recognizing his inability to measure some human condition, trait, or ability, and apparently believing that human behavior can be fractionated, substitutes

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[5] Brubacher, John S., *Modern Philosophies of Education*, page 272. New York: McGraw-Hill Book Company, Inc., 1939. Brubacher refers here in a footnote to *National Education Association, Department of Superintendence, Tenth Yearbook*, page 404. Cf. *supra*, page 49.

some "measurable" factor which he believes is a component part of the original trait. Thus a test maker desiring to construct a device for measuring *physical condition* might select *strength* as the substitute variable. That is, he purports to measure physical condition and, assuming a close relationship between it and strength, substitutes the latter for the former. It has been pointed out [6] that if this substitute factor is to be judged as a valid substitute, the ratio between the substitute and the original factors must be constant. Yet if strength is a valid substitute for physical condition, the ratio between the two shall be constant regardless of such factors as age, body build, motivation, and the like. In the case of strength, a delirious person may manifest extraordinary strength. So may a person highly motivated by fear.

Misconceptions in using tests. The misconceptions of standardized or any other tests result from the fallibility of human beings—those who assume the existence of distinct, separable human traits, those who make the tests, those who administer the tests, pupils who take the tests, and those who interpret the test results and recommend and take some action. It will be noted that many of these sources of fallibility lie within the teacher. It therefore seems pertinent to discuss briefly some ways that tests may be fallible and made more fallible.

Most of us seem to strive toward the finding of certainty. One symbol of certainty to a teacher of physical education is a key, formula, process, or device that solves one's problems. It is understandable that a teacher of physical education, who, after lifting the eyebrow of cynicism toward testing and tests for too many years, might come to place faith in a particular test. The teacher's hope is that, although the test is not panaceanic, it will help eliminate some teaching problems, solve other problems, and facilitate securing and making sure

[6] Monroe, Walter S., and Engelhart, Max D., *The Scientific Study of Educational Problems*, page 128. New York: The Macmillan Company, 1936.

of the desired results of teaching. Most experienced teachers of physical education have gone through the period of doubt as to the value and practicability of standardized tests. We then learned a little more about tests and testing.

Standard tests: their selection, use, and interpretation. Caution should be used in the selection, use, and interpretation of standardized tests. The following nine reasons explain why.

First, before selecting a standardized test, the teacher ought to know what it is that he hopes to measure, rather than just testing to be testing. Never has testing related to physical education been conducted on such a wide scale as during World War II by the armed services. Millions of men of various ages in different service branches were tested at least twice during their training days. It is true that the *chief* purpose of this testing was to determine physical fitness, yet the tests varied in different armed services because measurement of different kinds of physical fitness or different aspects of physical fitness were demanded by the various service branches. Considerable care was taken to determine *exactly* what was to be measured before a test was constructed or selected, and standardized. The procedure followed by the Army Air Corps was typical.[7]

Second, related to the above is the decision of the purpose for testing; *i.e.,* is the purpose of the test compatible with the purpose for testing? For example, one would not select a diagnostic test to use for classification purposes.

Third, if these two purposes coincide, is the test appropriate [8] for the type of program of physical education to be used; *i.e.,* will it diagnose weaknesses for your type of program, classify for your type of program, measure achievement in your type of program, or motivate students in your pro-

[7] Phillips, B. E., "The JCR Test," *The Research Quarterly,* Vol. 18, No. 1, March, 1947, page 13.

[8] See "The Value of Local Tests," pages 568–569.

gram? One of the striking features of some of the armed-service programs of physical "training" was the intimate interrelationships between these programs and the tests of physical fitness. Just as these tests varied among different service branches, so the programs were somewhat dissimilar because the *purposes* of the programs were geared to demands and needs, as were the *purposes* of the tests. The preciseness and clarity of these matters are worthy of consideration by physical educators.

Fourth, the test should be appropriate to the local situation. This criterion is often overlooked. A standardized test may not fit local conditions, circumstances, and persons. The standardized tests used by most of the armed services were selected in terms of prevailing conditions and circumstances. For example, the Navy Standard Physical Fitness Test lacked a running event for either speed or heart-lung endurance because it was anticipated that the test would be given on shipboard. On the other hand, these armed-service tests had largely to ignore the criterion that the test be appropriate to those tested. The test was meant to measure individuals' *fitness for a job to be done,* regardless of age, background, body-build, and so on. The demands of war overruled consideration of the individual.

Fifth, a standardized test does not automatically yield data that conform to scientific criteria. The administration of the test may be faulty. This weakness was the chief criticism of some of the tests used by the armed services. Regardless of the clarity and exactness of directions and regardless of instructions to testers, the carrying out of these instructions is subject to human error.

Sixth, it is extremely difficult to secure agreement, among those interested in the physical welfare of children and youth on what things are of sufficient worth to justify the establishment of national norms. There have been major changes in the objectives of physical education within even as short a

time as the last fifty years, as Dr. Minnie L. Lynn of the University of Pittsburgh points out conclusively in her doctoral dissertation. Changed objectives mean changed program emphases and, in turn, changed types of tests. Even if all those now interested in the nation's physical welfare reached an agreement as to the items to be included in, and the standards for, an achievement test, another generation would find the experts disagreeing. We teachers should be wholesomely skeptical, yet openminded, of national norms or standards as goals for which *our* students should strive. Needs are personal and specific.

Seventh, one criterion of the use of a standardized test is its value in pupil guidance. After spending time, thought, energy, and perhaps money, one should secure useful results. The results of a pertinent standardized test may indicate a change in the entire physical education program, a change in emphasis, a change in the participation of some students, and so on. Test results indicate the need for more participation; for example, classes divided into squads participating simultaneously in different activities instead of the old practice of having most of the class *sit* while ten (twelve) students play basketball for five minutes. The test should indicate areas, kinds, and degrees of participation needed.

Eighth, we must avoid doing foolish things on the basis of the results of a standardized test. One test-maker advocates excusing from physical education all students who score in the upper quartile of his norms. The astonishing thing is that some teachers who use his test have followed his advice! Is it not understood that each child deserves to be given opportunity to develop his own potentialities? Such aspects as growth, fitness maintenance, and self-expression are only fostered by participation.

Ninth, standardized tests should make for better teaching. Do the tests supplement and improve the teaching? Or does the teacher neglect many of the other values to be gained

from physical education in order to have his students rank high—in the test items—in the city, county, state, or nation?

Misconceptions of the functions of measurement. The foregoing discussion of test selection is related to the larger problem, misconceptions of the functions of measurement. If "measurement is the essence of science," any criticism of measurement borders almost on the sacrilegious, in the minds of many teachers. Yes, the greater the scientist, the more ready is he to admit such weaknesses of scientific measurement as are listed below. The purpose of presenting these facts is to explore further the reasons for a critical approach to tests and measurements in physical education. It is understood that the following points refer to "scientific measurement" in physical education:

1. Measurement is not concerned with the purpose, value, or consequences of physical education.
2. Measurement is based upon both the assumptions of measurement and the assumptions of physical education.
3. Measurement lacks the tools and techniques for evaluating itself.
4. Experts in measurement often fail to try to prevent unthinking acceptance of that which goes under the name of "scientific measurement" in physical education.
5. Measurement fails to include the not-yet-measurable yet valuable phases of physical education. As far as measurement is concerned, these latter do not exist.
6. Measurement is always fallible. Tools of measurement constantly are improved, and new ways of manipulating data are invented. Yet, before these improvements are made, some of us act as though the present tools and statistical methods were infallible.
7. Measurement is limited largely by the needs and interests of physical educators and test experts. Do they correctly interpret the needs and interests of children?
8. Measurement yields data. These data may answer the question "How much?" but how much of *what*, and *why*, remain unanswered as far as measurement is concerned.
9. The statistical aspects of measurement, such as the Mean, tend to direct attention away from the individual pupil.

10. Measurement assumes the existence of isolable human traits.

11. Measurement in physical education at best is trial and error. We can only try to get results in the best way we know at a given time.

12. We do not know the motives behind the expert in measurement. It is possible to work in this field for selfish reasons.

13. Measurement is circumscribed by its tools.

14. Measurement yields data from which we generalize. This generalizing is merely stating what seems most probable to us about some aspects of pupils' behavior as we now understand it.

15. The value of measurement is not scientifically but philosophically determined.

This incomplete list of limitations presents for our consideration the proposition that measurement is circumscribed in scope, purpose, and place in physical education. Someone may reply: "Of course scientific measurement in physical education is limited. Who claims otherwise?" We are not so much interested here in who *claims* otherwise as we are concerned about the teachers who, after taking a course or two in tests and measurements, lose their perspective and judgment relative to the appropriate uses and justifiable interpretations of tests and measurements in their teaching program.

Experts in educational measurements are becoming more critical. Shall we now consider some recent reactions to their own work of leaders in the field of tests and measurements in education? We shall observe not only a definite tendency toward frank criticism but the emergence of a recognition of the value and essential nature of *subjective* data as revealed through evaluation, not measurement. The following viewpoints are not so much the opinions of individual experts in educational measurement as they are summarizations of opinions of these experts.

1. The mysticism, novelty, and superficial lure of standardized tests have passed. We now want a nonscientific answer to a nonscientific question—namely, "What are the basic values of testing?"

2. Tests must be related to the program being followed.

3. Judging a teacher's ability by comparing the scores made by his pupils with "norms" is unfair, vicious, and disastrous in terms of the teacher, the program, and the pupil.

4. Tests may deter the progress of education just as easily as they may aid it.

5. Testing procedures that lack the fundamental purpose of pupil guidance are defenseless.

6. Intelligent pupil guidance is based not only upon the results of "objective" data but upon all evidence, including the intangibles, it is possible to acquire about the pupil.

7. Obviously, testing has been based upon the assumption that education is not a complex process. Testing will be a highly questionable process as long as this assumption is taken.

8. Tests should yield satisfactory data regarding *all* the desirable, measurable outcomes of a given field because tests forcibly point out to the teacher those variables which the test purports to measure. This pointing-out to the teacher influences what he teaches and how.

9. Pupil guidance depends not only upon discovery and diagnosis of difficulties but upon the selection and application of techniques of prevention and remedy. Obviously no series of objective tests supplies all this information.

10. The pupil's scores should be in terms of his own previous and concurrent records, not in terms of large-group norms.

11. Rates and levels of learning, various reactions to experiences, individualization of the program, and integration demand a disregard of intercomparisons between individuals, similar grades, and schools.

12. Many a teacher who doubts the value of tests is not to be blamed. There is frequently too great a discrepancy between that which is tested and that which is deemed worthy of teaching.

13. Test results not supplemented by and interpreted in terms of the teacher's judgment, that is, in turn, based upon sufficiently careful observations, are unjustifiable factors in pupil guidance.

14. Education is interested in something that does not exist in some amount—namely, the *potential* growth and development of the child.

15. A test may be objective in terms of scoring the test, and yet leave unmeasured vital personal factors in the complete evaluation of pupil achievement.

16. The self-analysis, self-appraisal, and a statement of personal

evaluation of a pupil regarding a given learning-experience may be far more vital as a basis for guidance than a score in a test covering this area of learning.

17. Types of tests and their emphases have mirrored the development of the program, its major objectives, and its needs. Now that we have moved forward to new practices, new programs, and new objectives, we need new tests—new types and new content. Unfortunately, the prestige and inertia of the older tests tend to perpetuate the traditional objectives, practices, and programs.

18. Evaluation techniques stimulate teachers to analyze the purposes of teaching a given field, to think of pupils instead of curricula, and to discard former, taken-for-granted conceptions of the nature, needs, and interests of pupils.

19. Approximately two thirds of the many recently constructed courses of study list such intangibles as the acquirement of proper attitudes as objectives.

EVALUATION

In this chapter, for the sake of emphasis, let us regard measurement and evaluation as distinct processes. Actually these two processes overlap in that area where measurement is judged to become less accurate, reliable, and objective, and evaluation is judged to become less subjective and more reliable and accurate. In fact, there appears to be a tendency in some quarters to use the term "evaluation" as embracing not only its distinct functions but measurement's functions as well. Viewed in this manner, evaluation may be represented as a scale at one end of which are very precise types of measurement and at the other end of which are types of personal judgment. On the other hand, occasionally a writer considers "measurement" as the broad and inclusive term and "evaluation" as only a phase of measurement. This lack of consistency in interpretation of terminology in psychology, education, and physical education is known to most teachers. That this condition denotes a lack of precise, clear, well organized thinking on the part of the leaders there seems to be no doubt. In an effort to avoid confusion, let us attempt

to distinguish between measurement and evaluation for the purpose of better understanding this chapter.

Terms explained. Measurement in education may be regarded as quantitatively determining the answers to "the extent to which," "the degree of," "the amount of," "how much," "how many," and similar questions regarding certain educational phenomena. Evaluation may be regarded as a way of trying to find out answers to such questions as: Of what value is this experience to the child? What does he think of this experience? How does he feel about it? Does he understand its place (if any) in the social order? Of what value is it in terms of society's welfare? What is the pupil's or the teacher's judgment regarding the importance of this learning? How well does the child analyze his difficulties in learning this act? How well does this learning function in the child's life? Measurement assumes standard units of educational data—that is, that they are equal and interchangeable. Measurement is assumed to devise and construct standard units for educational data through assigning numerical terms to educational data. Evaluation, to personify, desires to know the value of that which it is assumed has been measured. It regards as valuable many experiences and learnings not describable in numerical terms, not capable of being dogmatically put into standard units. Evaluation questions whether all that exists can be expressed in numerical terms.

It should be understood that evaluation is interested in securing the most accurate answers to questions, but it does not follow that these answers must be in numerical form or exist in some *measurable amount.* It is also to be understood that evaluation does not decry measurement because of the latter's use of numerical terms, standard units, its theses, and the like. Rather, evaluation proposes that *in spite of the fact* that many worth-while experiences in education are not measurable at present, they are so essential to an understanding of teaching and learning that we must consider them and find out all about

them. Evaluation would also question the value of all that is measurable, and question the value of measuring some phenomena that are now measured. Nevertheless, evaluation assigns a value to the units that measurement counts. For example, a boy may get a score of 84 on some strength test, but evaluation must decide what each of those 84 points is worth to the boy in comparison to each of the 96 points that he might have scored.

To summarize, evaluation emphasizes the value of a given experience or learning to the child (now and later on to the child as an individual and to the child as an integrating personality in the social order), and it emphasizes the use that is made of all that is learned. (How? In what respects? To what extent are the learnings made a part of life? How functional are they?) Measurement emphasizes different kinds of numerical accountings of educational phenonema which are purported to exist in some measurable amount.

Evaluation in physical education.[9] The ascendancy of the child over the subject as the pinnacle of attention in education is not new. (This statement is not to claim the substitution has actually taken place in many schools.) The child-centered curriculum, the child-centered school, and all the other satellites of the movement of the child-as-the-center-of-education are older concepts in the history of man than subject-centered education. Education recently has passed through a period in which the *real* center of attention in school subjects was all but forgotten. Yet even during this period, one of the marks of the good teacher was his understanding of and his efforts to understand those whom he taught. The recent emphasis on the community-centered school does not—cannot—displace the child as the center of education, although it

[9] The readers interested in a competent, comprehensive application of evaluation in the field of physical education for girls are referred to Dr. Rosalind Cassidy's *New Directions in Physical Education.* New York: A. S. Barnes and Company, 1938.

gives direction to the child's education and emphasizes the new awareness of educators of their obligation and responsibility to the community.

As might be expected, accompanying the change of emphasis from subject to child is the change to a recognition of the place of evaluation. This transition is not difficult to understand. The more thoroughly we understand the child and the more he is studied, the more we recognize that we must surely go *beyond* the present tools of quantitative measurement to find out what his education is doing to, for, and with him.

It is also interesting to realize that the final test of physical education is in the hands of society, not the educators or the physical educators. This test is not made up of measurable bits. It consists of estimates and appraisals of physical education as reflected in the lives of persons. How valuable has physical education been to you, Mr. and Mrs. Adult? The emphasis upon evaluation seems to promise foci of attention in teaching physical education which we have largely underestimated in the past.

Measurement may tell us how strong the pupil is in terms of the available tools and certain assumptions. Measurement may tell us how much he improves in his "strength scores" (whether this improvement is due to growth, development and maturation, or special exercises, is never revealed). Measurement also may tell us some things about the pupil's status and improvement in certain skills, speeds, reaction times, and the like. But what of the pupil's attitude toward this program? How important is the attainment of these skills and strengths in the pupil's system of values? What of his understandings regarding the implications and projected applications of such acquirements?

If a teacher cares not a whit for the pupil's desires, values, attitudes, personality, and character, perhaps a glance through another pair of glasses might be of interest. Assuming that

the teacher is interested in his profession, and assuming that physical education really has worth-while contributions to make to the individual pupil, the indifference and even antagonism of many adults and post-school youths toward physical education must be of concern to the teacher. Regardless of how practical and conservative a teacher may wish to be about the outcomes of physical education, he cannot dodge the fact that most of today's pupils in physical education are tomorrow's voters for or against physical education. The weight of adult public opinion, based upon its former school experiences, already has broken down the door to the academic stronghold of several "subjects" and put them to flight. The importance of considering the pupil's attitudes, interests, and values goes beyond the one consideration, his present education. The importance of these matters affects his reactions, opinions, and votes as an adult citizen.

Evaluation, purposes and outcomes. The major planned purposes as well as the actual outcomes of physical education should be related to the real life and thinking of the pupil and society. The leaders in physical education may need to change not only the stage setting but the act as well. The acquirement of organic vigor, neuromuscular skills, and desirable social behavior is vital and important. But it is vital also to satisfactory learning and to the future of physical education that the pupil, as he progresses through school, increasingly recognizes the values of physical education in terms of mankind, constructs his own values of physical education, develops new and favorable attitudes toward physical education, and better understands its scope, nature, and purposes. Of the proposed outcomes mentioned in this paragraph, only a very few may be quantitatively measured.

It is to be noted that the desire to *evaluate* physical education frees one's ideas in a consideration of major objectives, their scope and nature. The idea of evaluating physical education rather than measuring it indicates new areas of em-

phasis, new possibilities, new basic purposes, a few of which have been indicated.

Evaluation and conduct. Among other things, evaluation sets the teacher to observing the behavior, the conduct, the actions and reactions of the pupil as he participates in a physical education activity. That is, through evaluation the teacher becomes interested in: what happens to the *whole* pupil when he participates; what, besides skill performance, he does with what he learns; what he does in the varied and many situations in and out of class; whether and in what ways he is maturing in his decisions, system of values, understandings, and self-responsibility; whether symptoms of integration or frustration can be observed, attempting to maintain the former and prevent or remedy the latter; the ways in which the pupil is growing and developing in his social relationships; and the ways he is acquiring such qualities as reliability, ingenuity, and emotional stability. Do these acquirements exist? Can they now be measured? Is it worth while that we find out as accurately as possible these aspects of the growth and development of the pupil that may help us better to understand the pupil, to guide him, and to check on the results of our teaching?

Methods of evaluation. Fortunately, most teachers are curious to know the ways that evaluation can be conducted. The known methods do not yield equated units of scientific data. They are merely common-sense ways of trying to secure information. In fact, these methods of evaluation are not new. Some teachers have used them for years.

One of these methods of evaluation is *observation.* In this case, the name of the method is quite respectable in "scientific" circles, but the interpretation of what is observed is open to question. For example, the teacher may want to know if the pupil is growing in sociability. One case of this type is recalled. The pupil in question had a reputation for being "high hat," "passing up" classmates and teachers in the halls

and on the street. In most other ways the pupil seemed to have a good personality, was talented in music and drama as well as in physical education and athletic activities, and was well liked by a few youths who seemed to know him. The teacher observed these "symptoms" for a semester and, desirous of guiding the boy, called him in for a chat. The conversation was led to the point where the teacher expressed his interpretations of several months of observation and followed this by some fatherly advice about ways to avoid being thought by others to assume intellectual superiority. After some hesitation the boy revealed that he was ashamed to wear his glasses except when studying, that he actually could not see persons well enough to recognize them without his glasses, and admitted that he knew some persons thought he was snobbish. The result of the conversation was that the boy began wearing his glasses, and the teacher soon noticed "symptoms" of popularity. In this particular case the boy was helped in spite of the fact that the first implication based upon observation was erroneous.

Observation as a method of evaluation must be carefully applied. Some suggestions are enumerated here:

1. It includes more than merely "looking out," "gazing," and "watching"; it also includes the use of all the senses, not just the eyes.

2. Experience in physical education is no guarantee that the teacher will observe the significant "symptoms," but the person inexperienced in physical education seldom observes traits of conduct that relate directly to physical education.

3. Even temporary conclusions should be drawn with great caution. One observation of an expressed behavior trait may mean nothing. Several observations of the same "symptom" under similar circumstances *may* be indicative. On the other hand, observation of some nontypical behavior *may* yield a lead to further understandings, to solutions of other problems.

4. We interpret our observations in terms of personal experiences which may be incomplete, inadequate, or of an inappropriate type.

5. We are apt to think we understand behavior merely because we observe expressions of it.

6. The observer should know what he is looking for without "seeing into the situation" that for which he is looking.

7. Observation always gives way to more valid, accurate methods of collecting information.

Other methods of evaluation include *interest-inventories, check lists, questionnaires, score cards, rating scales, personality inventories ("tests"), interviews, estimates, appraisals, photographs, moving pictures, judgments; "tests" of such phenomena as attitudes, social maturity, emotional stability, and the like; diaries, anecdotal records, case studies, committees, inspection, group discussions, self-ratings, and self-appraisals.* Such methods are used in securing from and about pupils essential and vital information not available through more objective methods such as the health examination and tests of traits that are purported to exist in some amount. The information resulting from these and similar methods of evaluation serve both as a check on what is being acquired by the pupil (besides quantitatively measured data) and as a basis for guidance. Increasingly, teachers are expected to help the pupil as he develops, to understand and analyze his needs, to reset his goals and values, to identify and take steps to solve his problems, to recognize his attitudes with possible resultant changes, and to make ever-increasingly reliable self-estimates.

In closing this section, let us remind the reader that in the preceding section we assumed a critical attitude toward tests and measurements for certain stated purposes. In this present section we have distinguished between evaluation and measurement for the purpose of emphasizing the possibilities of and opportunities for gaining information often frowned upon by test enthusiasts in physical education.

Before proceeding to a brief discussion of measurement, it

should be understood that the authors recognize evaluation as an area of investigation that gives way to measurement when tools are invented to measure scientifically the phenomena now covered by evaluation. It might well be repeated that the authors readily recognize that either "measurement" or "evaluation" may be considered as inclusive of the entire gamut of scientific measurement and unscientific appraisals. We have no quarrel with the words. By creating differences between the meanings of the two words we have sought to emphasize the importance of and value in the "evaluation" type of information, as a counteroffensive against the exaggerated claims made in the name of tests and measurements in physical education. It seems quite significant that, to date, no test in physical education has yet been accepted or recommended by the Cooperative Testing Service of New York City.

MEASUREMENT

In spite of what has been said and more that might be said in a criticism of measurement, it deserves the active support and active cooperation of every teacher of physical education. Why? Because existing tests and devices, as instruments of measurement, symbolize the best we have in an attempt to secure facts instead of guesses, and to approach the truth regarding measurable phenomena instead of being satisfied with mere assumptions. The data resulting from responsible measurements in physical education are the most concrete, verifiable, provable phenomena in the field. As such, measurement is valuable to the teacher in several ways.

Purposes of measurement. What are some of the ways that tests and other devices of measurement and their results may be valuable to teachers?

1. Bases of estimates of achievement or improvement of one pupil, class, or school.
2. Bases of justifiable comparisons of ability, achievement, or potentiality between pupils, classes, or schools.

3. Diagnoses of difficulties, weaknesses, and gaps in the learning and experiences of a pupil, class, or school.
4. Bases of grading, promoting, or classifying pupils.
5. Bases of teaching emphases and methods.
6. Bases of pupil guidance.
7. Bases of motivating learning, review, drill, practice.
8. Bases of teacher self-appraisal.
9. Bases of checking on the acquirement of measurable outcomes.
10. Sources of quantitative information about the pupil.

It is understood that tests have other uses, including those valuable to the supervisor, the school administrator, and the research worker.

Kinds of measurement.[10] In physical education, the kinds of measurement receiving most attention have followed the emphases in physical education during particular periods. Roughly, kinds of measurement in physical education may be classified as follows: *anthropometrical, strength, cardiac functional, athletic power and achievement, neuromuscular control, physical efficiency and ability, sport technique, motor educability, general motor capacity and ability, endurance, special abilities, posture, character,* and *attitudes.* Obviously, kinds of measurement need not follow emphases in physical education. Increasing attention to measurement for research purposes should yield results that may very well give rise to new emphases in physical education.

Selecting the tool of measurement. As indicated previously, if one decides to use a standardized test or a test devised by another, considerable caution should be exercised in its selection. We might borrow a leaf from the physician's book in this instance. After he decides what it is he wishes to know, he selects the best available and appropriate measures and methods for securing his information. Testing for

[10] Bovard, John F., and Cozens, Frederick W., *Tests and Measurements in Physical Education.* Philadelphia: W. B. Saunders and Company, 1939.
McCloy, Charles Harold, *Tests and Measurements in Health and Physical Education.* New York: F. S. Crofts and Company, 1939.

the sake of testing, or because it is "being done," or because it is "modern" is expensive in terms of the taxpayer's money and of the teacher's and pupils' time and energy.

In selecting a test the teacher should consider, among other criteria: (1) the purpose for which a test is needed; (2) the purposes and value of the content of the test; (3) its validity; (4) objectivity; (5) reliability; (6) economy in money and time, other factors being equal; (7) ease of scoring and administration; (8) appropriateness to the locality and group; (9) existence of alternate or equivalent forms of the test; (10) bases for and aids in interpretation; (11) durability; and (12) convenience of test equipment for handling.

The value of local tests. Some of the limitations of the standardized test have been mentioned previously in this chapter. It is particularly worth while to recall that the test may be and often is utterly unrelated to the local situation in such essentials related to the test as its (1) content, (2) length, (3) organization, (4) norms, and (5) difficulty; and in such essentials related to the pupils as (6) their background in the phenomena to be tested, (7) their attitudes toward some or all of the factors of the test, (8) their rate of performance, and (9) their quality of performance. Certainly in a standardized test no claim is made by its makers for validity in terms of the local course of study and points of emphasis. And certainly the teacher earnestly desires a test that comes as close as possible to measuring that which it purports to measure.

Almost invariably the teacher desires to know the degree to which the pupil has learned that which the teacher has presented; that which he has emphasized; how much a given pupil has improved from time to time in his traits and abilities; how a pupil in a given class compares with classmates in that which is taught and emphasized locally; and what particular difficulties a given pupil is having in that which is being taught and emphasized locally. Satisfactorily prepared local tests,

particularly those used for showing the pupils' achievement in the local program of physical education, are on the increase. And while local tests will not replace standardized tests, chiefly because of their dissimilar purposes, the local test is becoming an invaluable tool for instructional purposes. The standardized test, with its general content as a basis for school-to-school, city-to-city comparisons, and for comparing the local group with "national norms," is useful for administrative and research purposes. The local test, with its specific, appropriate content and application, is useful as a basis for grading, for diagnosis of individual difficulties, for individual motivation, and for measuring class achievement, in addition to the values already mentioned.

Pupil participation in local test construction. There is an increasing tendency for experienced teachers to make use of pupil cooperation in the construction of local tests. Considerable and careful guidance of pupils is necessary in such a project. The direct purpose of securing pupil participation in this work is to broaden and deepen their understandings and systems of values, and to improve their attitudes toward physical education. The less direct but perhaps more important purpose of this type of experience is to give pupils practice in using some of the tools of democracy. The skillful teacher aids the class in developing the suggestions, made by even elementary school children, into acceptable items for local tests. Some teachers would go still farther. They accept the suggestions of children *per se*, permit the class to try them out, and aid the children in deciding which items are worthy of retention. This pupil-experience-approach to local test construction is a bit time-consuming for the average situation and perhaps more progressive than most teachers are now willing to accept.

Teachers who are successfully using pupil participation in the construction of local tests are gaining new insights into and understandings of their pupils' ideas of physical educa-

tion and the values they place upon various aspects of physical education and upon the field as a whole. In fact, many teachers report that for the first time they are enabled to view physical education "through the pupils' eyes," thus discovering needed explanations, emphases, program revisions, modified techniques of teaching, and other indirect suggestions for better teaching.

Usually a few well-chosen questions by the experienced teacher are sufficient to start the flow of suggestions from the pupils. For example, the teacher might ask questions such as: *What physical education activity do you like best of all?* (Wide differences of opinion may be expected.) *Can you give one or more reasons why you like your favorite activity? Do you think other boys and girls in this grade should learn it? If so, why? Can you think of any other "things" you get out of this activity?* The teacher then might get the pupils to see the several mutual or common outcomes that may be derived from several of the activities mentioned. *What do you think a ninth (or other) grade boy or girl ought to get out of physical education this week that he would fail to get if physical education were not given in this school? This month? This semester? This year?* By means of suggestive questions the teacher may aid the class in developing proposals of expected outcomes in areas unfamiliar to pupils. Finally the teacher might ask if they think a test made up of these various suggestions would be a fair test of physical education for this class.

Teachers who object to spending time in a physical education class in this type of development make use of the conference method with individual pupils. Still other teachers prefer to work with pupil committees on such projects.

Guides in local test construction. The teacher who is devising a local test and does not take all possible and appropriate steps used in constructing a standardized test is wasting his time. The above advocacy of the local test is not to be understood as a recommendation of "any old kind" of testing.

Rather, the point is that tests can be localized and at the same time devised in such a way as to conform appropriately to the criteria of acceptable test construction. What are some of the guides to be used by the teacher in the construction of local tests? The following guides are not listed chronologically or in order of importance:

1. The test items of an achievement test should represent such a range of difficulty, for those who are to take the test, that those with least ability can successfully perform some of the test items and those with greatest ability cannot successfully perform all of the test items. In a diagnostic test the purpose is usually to find out the inadequacies in pupil learnings. That is, the test is devised to find out where remedial teaching is necessary.

2. The test items of an achievement test should be arranged in order of increasing difficulty.

3. The number of test items should be large enough to provide a representative sampling of the important factors or phases of that-which-is-being-tested, and at the same time give a fair and accurate picture of the pupils' ability. The number of test items, of course, should be limited by the length of time pupils require to take the test, the percentage of total class time to be devoted to testing, and the length of the class period.

4. The scoring of the test items should be as objective as possible. This objectivity in scoring is illustrated by the "pass" or "fail" type of *items* seen in Brace's Test of Motor Ability [11] and the type of *tools* used in measuring traits or abilities, such as speed and distance, by Cozens [12] and his associates Cubberley, Neilson, and Trieb in their excellent "achievement scales" for different groups.

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[11] Brace, David K., *Measuring Motor Ability.* New York: A. S. Barnes and Company, 1927.

[12] Cozens, Frederick W., *Achievement Scales in Physical Education Activities for College Men.* Philadelphia: Lea and Febiger, 1936.

Cozens, Frederick W., Cubberley, Hazel J., and Neilson, N. P., *Achievement Scales in Physical Education Activities for Secondary School Girls and College Women.* New York: A. S. Barnes and Company, 1937.

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5. Any local test should be supplemented by a carefully planned set of directions, with illustrations or demonstrations if the pupils lack experience in the type of test given. If a specific time limit is set for taking the test, the directions should include this information. The pupil should also be informed of the general plan of scoring so that he may know where to direct his attention and energy.

6. The teacher should make up his mind as to the trait or ability he purports and attempts to measure by means of the test. He should also decide the type of test—e.g., diagnostic or achievement—because the type of test items selected is related to the type of test. The validity of the test is dependent upon such factors.

7. The test should be as valid as possible. Earlier in the chapter we have discussed some difficulties in this phase of test construction. The teacher must not conclude that a test *made* up of the most valid test *items* will make the most valid *test.* Many of the items may measure the same basic aspect; items showing less item validity may spread the scope of the test and make the total test more valid.

8. The test should be as reliable as possible—that is, it must accurately measure whatever it does measure.

9. The test should attempt as *directly* as possible to measure the trait or ability that is supposed to be measured.

This brief discussion of the important steps to be taken by the teacher constructing local tests assumes that the local administration is acceptable to the idea of the use of local tests.

Factors governing the installation of a testing program. What are some of the factors related to the plans for a testing program that should be carefully considered by the teacher, and most of which should be discussed with the school administrator, before introducing a test or installing a testing program? Here are some considerations:

1. The purposes of this plan of testing program.
2. The attitude of the community toward testing.
3. The attitude of the school administrator toward testing.
4. Appropriateness and desirability of the test in terms of the pupils. For example, the teacher would avoid a test such as Rogers P.F.I.[13] without first knowing definitely the health status of the pupils through a good health examination.

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[13] Rogers, Frederick Rand, *Tests and Measurements in the Re-direction of Physical Education.* New York: Bureau of Publications, Teachers College, Columbia University, 1927.

5. Adequacy and availability of facilities and equipment for conducting the testing program.
6. The type of physical education program used previously and at present.
7. The teacher's preparation for the *entire* task planned.
8. The teacher's knowledge of the pupils to be tested.
9. Justification for using the teacher's and pupils' time in such a project.
10. The amount of time available for the program.
11. Possible availability of assistance of test experts.
12. The possibility that better tests are available to accomplish the main purposes of the testing program.
13. The disposition of the results in terms of teaching and learning.
14. Cost of the testing program.
15. Possible attitude of pupils toward the testing program.
16. Claimed purposes of the tests to be used.
17. Recency of norms of the tests to be used.

Guides in selecting a standardized test. The teacher about to select a standardized test should first ascertain certain information about the test. There is little need for spending money on the purchase of a test, much less equipment, unless it is as satisfactory as can be expected. Publishing companies or the test devisers themselves can furnish important information about a given standardized test, such as:

1. Intended for what age or grade levels, and which sex.
2. Purpose.
3. Brief description.
4. Necessary equipment and its cost.
5. Needed assistance.
6. Adequacy of directions.
7. Time required to administer.
8. Scoring plan.
9. Recording plan.
10. Number of cases in original and any subsequent studies.
11. Representativeness of these cases.
12. Norms for what groups; when determined.
13. Validity, reliability, objectivity of scoring.
14. Nature of scores.
15. Information needed to work necessary formulae.
16. Major conclusions of basic study.

17. Admitted limitations.
18. Other standardized tests covering the same area and for the same purpose.
19. Rating of test by test experts besides the test deviser.

GRADING

Basic questions. Any broad-gauged discussion of grading or marking physical education is charged with controversy. Why do we give grades? How important and valuable are these reasons? Is it possible to accomplish these purposes without using "letter" or "number" grades? Do grades shift the pupil's attention from the value of learning to the acquirement of grades? Is the basic idea of orthodox grading a product of or related to agrarian individualism or industrialism with its emphasis upon efficiency and cooperation? Should grades be based upon only objective measures or is it justifiable to include information gained from evaluation? Should grades consider a pupil's level of ability as compared to others in the class? Should grades be chiefly an expression of the acquirement of specific measurable bits such as isolated skills or chiefly the functioning of the skills such as the playing of a game made up of these skills? Should grades be based upon ability, improvement, potentiality, or actual achievement? Should such acquirements as knowledges and attitudes be considered in grading? To what extent should attendance enter into arriving at a grade? Is it possible to give grades but so emphasize the fundamental, valuable learnings that pupils will not seek grades as ends?

Kinds of grading. Regardless of one's answers to the above questions, the teacher usually must cooperate with the school administration in using the grading plan in operation in the school system. This, however, is no reason for not knowing some of the characteristics of a few of the grading plans being used.

The "per-cent system" is still one of the most common grad-

ing plans in spite of the fact that it has repeatedly been shown to be one of the poorest ways of marking. In this system, the pupil is marked on the basis of 100. What does 100 represent? Does it represent perfect performance in skills in the activities offered? Best performance in the class? Satisfactory performance? Mastery of skill and knowledge and demonstration of desirable attitudes? Greatest improvement? Highest attainment? Of what?

The "letter system" is related to and developed from the "per-cent system." In the "letter system," usually, *A* represents 95 to 100, *B* represents 85 to 95, *C* represents 75 to 85, and so on. This system avoids the difficulty of a teacher's virtually claiming the ability to distinguish between performances of 82 and 83. However, it fails to avoid this same difficulty at the "joints"—*i.e.*, 94–95, 84–85, 74–75, and, further, it overemphasizes differences in scores near these "joints."

Neither the per-cent nor letter systems permit valid comparisons between marks given by different teachers or between schools. For that matter, one teacher's marks at different intervals are not validly comparable because the level for passing is conveniently raised or lowered to fail some but not too many.

Then in the case of scores on tests being sufficient in number and satisfactory in spread and concentration to form a reasonable curve of normal probability, or "normal curve," the average grade on the basis of 100 is in the neighborhood of 50. Yet in these two grading plans, the average grade is between 75 and 85.

There is also the question of what constitutes a failing grade. Who is to say what constitutes failure as far as quality of performance goes? Who is to say what constitutes a basic minimum in terms of numbers of activities learned? a basic minimum number and type of specific objectives? If 64 is a failing grade and 65 a passing grade, who can judge

or test physical education so accurately that this hairline of distinguishment is justifiably drawn? For that matter, what does 65 mean? That the pupil is better than 65 per cent of the remainder of the class? Or does it mean that the pupil has demonstrated satisfactory performance in 65 per cent of the work? Or does it mean that he is 35 per cent less than perfect?

These questions and the other indicated weaknesses are some of the reasons these two grading plans are being discarded. The teacher of physical education who finds himself in a school system using either of these systems refrains from any verbal criticism or critical attitude. Rather, he grades as best he can, attempting to avoid or repair the weaknesses. New teachers can easily bring the displeasure of both their colleagues and the administration by expressing or showing a critical attitude toward "the way you do things here."

Another plan of marking that no longer enjoys the recommendation of experts is the "accomplishment quotient." The basic idea in this plan is that pupils who attain high performance in tests or in activities should not receive high grades if they fail to measure up to their "potentialities." As might be guessed, this plan came into being when intelligence tests were credited with a kind of omnipotence—that is, these tests were supposed to reveal one's potentialities in mental activities. In using this plan in physical education, it would be necessary to construct a test of "general motor capacity," and set up norms for age, sex, height, and weight. Let us suppose a given pupil receives a score of 90 in the test. The norm for pupils his age, sex, and physique is 75. This gives him a "quotient" of 120 ($^{90}/_{75} \times 100 = 120$), assuming that if he he was equal to those of his group his quotient score would be 100. Now let us see how this is related to the pupil's achievement in volleyball. Either by means of a test or

rating, or both, the pupil, in comparison with others of his age, sex, and body build, is given a score of 95, with 100 as the top score. But because his "accomplishment quotient" is 120, the grade he receives in volleyball is only 79 ($^{95}/_{120} \times 100 = 79$). In other fields in education this grading plan was found to penalize seriously and unjustifiably the pupils with most ability. There is no reason to assume that physical education is an exception in this matter.

A *fourth* system of marking, which is highly recommended in case of a large number of pupils, or where the teacher has available the scores of several smaller groups so that a normal curve is approximated, is "sigma scores." These scores are based upon the Standard Deviation (sigma). One of the chief advantages of this plan is that the scores on different tests or tests with different means and Standard Deviations are comparable.

Assuming that the number and distribution of the scores justify statistical computations such as Standard Deviation, the finding of a pupil's sigma score is a simple process. Let us suppose that the Mean score in the soccer kick for distance for a group of twelve-year-old boys was 75 feet, and that the Standard Deviation was 12. What is the sigma score of a boy who kicks 99 feet? We simply subtract the Mean from the score received by the boy, which is 24, and then divide by the Standard Deviation. The answer is plus 2σ, or 2 sigmas above the Mean. The sigma score of a boy who kicks 50 feet is: $\frac{50-75}{12} = -2.08\sigma$ or 2.08 sigmas *below* the Mean.

To make the sigma score more easily understood by pupils, frequently the sigma score of 0, or where the Mean lies, is moved down 5 sigmas below the Mean since this distance below and above the Mean is apt to include the worst and best achievements. Five sigmas below the Mean gives us a kick of 15 feet. A kick of 75 feet, or the Mean, then has a sigma score of 5σ; the kick of 99 feet, 7σ; and the kick of 50 feet.

2.75σ. These are then multiplied by ten, since the pupil can easily think in terms of 100, or parts thereof. The average kick is then scored a 50; the 99-foot kick, 70; and the 50-foot kick, 27.5.

Scores derived in this manner are comparable from year to year, from test to test, and from pupil to pupil. If the teacher desires that part of the semester grade be based upon achievement in tests, the derived sigma scores would be averaged—that is, totaled and divided by the number of tests. Sigma scores for various tests are sometimes used in a student's profile-graph.

Factors in grading. One reason teachers disagree so widely in the factors to be considered in giving marks is that they disagree as to the purposes of grading. Some teachers still use the grade as a "whip," as evidenced by Professor Rudolph Pintner's (Teachers College, Columbia University) unpublished findings that of the fifty-one fears held by school children the greatest is the fear of failing. In fact Pintner specifically states: "The excessive worry of these children about school items would seem to indicate that our school system lays too much emphasis upon failing a test, having a poor report card. . . ." Other teachers use the grade in physical education as the chief basis of motivation, with the result that the children may be "grade-conscious" throughout the physical education class period.

In contrast to these uses of marks, there is the more recent use of descriptive sentences. The teacher merely indicates on the report card pertinent points worthy of emphasis. For example, "A. is average in her group in hockey. She has learned the elementary skills very quickly and easily. She seems very interested in physical activities, and she is always willing to take advantage of opportunities for self-improvement. A. is a very enthusiastic member of the group, but there are times when she could exert more self-control for the

good of the group as a whole." [14] The use of such statements does not mean that the teacher fails to measure and evaluate. As a matter of fact, such a statement needs to be based upon something besides an end-of-semester's musings. Such a statement might very well be an interpretation of test scores, appraisals, estimates, observations, anecdotal records, and the like.

It seems to be a reasonable assumption that, so long as grades are given, they should represent the estimated degree of achievement the pupil has made of the outcomes of physical education, toward which teaching and learning have been directed. Obviously, this includes testing the kinds and extent of knowledges acquired, estimating social behavior, attitudes, personality development, as well as testing skill, endurance, speed, and strength. The fact of the matter is that interpreting the outcomes or goals accomplished into marks is an unnecessary and full-of-trouble step. Could not goals for each grade be set up by the experienced, well-trained teacher, with guided pupil participation? The report to the parent and school administration then would be in terms of goals accomplished and not accomplished. No uniform set of goals for a given grade is advocated for the country at large. Rather, the goals for a given grade would be in terms of the abilities, needs, and interests of the group at hand. It is recognized that such a plan demands the services of well-trained teachers.

Classification. As has been recognized for some time, classification of pupils according to their abilities in physical education is impractical in almost all situations—the reason being that, where pupils are classified in school, it is on the basis of intelligence or scholarship. Furthermore, there is gross disagreement among physical educators as to the basis

[14] From *New Directions in Physical Education*, page 139, by Rosalind Cassidy. Copyright 1938 by A. S. Barnes and Company, Inc.

upon which classification should be made, with the exception of the health examination. Strength, height, weight, age, physical capacity, motor ability, achievement in specific activities, and physical ability are some of the proposed bases of classification. And again, there is an increasing number of leaders who question the principle of dividing pupils according to ability groupings because it does not represent life situations.

The ingenious teacher of physical education, however, classifies pupils within a given class so as to facilitate instruction. In swimming we have beginners, elementary, and advanced groups; wrestlers are divided according to weight; and football players according to ability and weight. In athletics, the attempt to safeguard the individual from injury is being increasingly considered.

The flexible squad system within a class lends itself admirably to classification for purposes of safety, equality of competition, and the purposes of instruction. At the present time we are not prepared to request of the school administration that pupils within a given grade be sectioned into separate physical education classes according to any plan except, possibly, on the basis of the health examination.

This statement does not condone the practice in some small high schools of sending high school girls, or boys, from all grades to a physical education class at one time. Precisely how a teacher of physical education is to teach a program that leads on to richer and broader experiences, in such a situation, has never been answered by school administrators who permit such a practice. On the other hand, teachers who work under such a handicap are somewhat better off than the one who was required to "teach physical education to all pupils in the school, grades one to twelve, at one time, without a gymnasium or a playground!" Situations such as these and others almost as lamentable forcibly bring home the fact that often the teacher's chief task, aside from doing his best, is to

"educate the educator," his administrator. In the meantime, it is suggested that the teacher can make the best of a bad situation. For example, one ingenious woman teacher who had a group of ninth, tenth, eleventh, and twelfth grade girls, totaling eighty-four, used to advantage the squad system and the apportioned-floor-space plan mentioned in Chapter 17. In some activities, those primarily for social purposes, the group participated as a whole. In other activities, the teacher actually had four programs of activities going on at the same time. Individualized teaching was not a characteristic of her work, but her ingenuity and intelligent efforts were the chief factor in gaining the principal's sympathy, respect, and, finally, action toward rectifying the situation.

It may be that the future holds some practical, justifiable, and otherwise satisfactory method of classifying pupils in physical education. In the meantime, many teachers of physical education will continue to have creditable types of classifications for specific purposes within their classes, so that learning is facilitated and enriched and pupil growth and development are promoted.

SAMPLE TEST ITEMS

True-False

1. Physical educators have been pioneers in some educational movements.
2. Physical educators lead other educators in the testing field.
3. All persons who have devised tests are test experts.
4. All test devisers possess a scientific attitude toward testing.
5. A standardized test is objective in every respect.
6. A test may lack complete validity and yet be of some value.
7. Man has many isolable, measurable traits.
8. Whatever is measurable is worth measuring.
9. All tests are fallible in some respect.
10. Scientific measurement is not open to criticism.
11. Experts in the field of educational measurements appear to be more critical of their field than experts in physical education measurements.

12. Evaluation and measurement may be used to mean the same thing.

13. Evaluation is unscientific and therefore has no place in modern physical education.

14. Observation as a method of evaluation is free from weaknesses.

15. The purpose of testing is measurement.

16. In selecting a test, the teacher should know its purpose.

17. Locally constructed tests are unscientific and should not be used by teachers.

18. Pupils are tested; hence they should have nothing to do with test construction.

19. Since there are no guides to test construction, only experts should devise tests.

20. If a pupil is average in physical education, he should receive a grade of 50, which puts him "below passing."

21. Classification of pupils in physical education is related to their safety.

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Self-Analysis and Improvement

"Know thyself."—SOCRATES

The nature of personality. The "biggest factor in getting and keeping a job is oomph: at least half of the men and women who lose jobs (except in Depression lay-offs) are fired for maladjusted personalities." [1]

Personality is *not* an intangible enveloping aura which precedes one's swaddling clothes; neither is it a rigid pattern which persists through life, cataloguing the individual as dull and neutral or colorful and dynamic, irrespective of personal efforts or environmental influence toward change.

Actually, personality is the impression one's behavior makes on others. Certain phases of behavior influence this impression more than others. People like a ready smile and an amiable disposition. They like a sense of humor, kindliness and sympathy toward others, fairness in dealing, cooperativeness, dependability, and responsibility. They like an energetic individual with socially worth-while enthusiasms. Personal habits of neatness and cleanliness, appropriateness plus taste in dress, and cultivation of pleasant and expressive voice pitch and intonations are three factors that add to the attractiveness of personality. Look over these aspects and note

[1] *Time* Magazine, December 25, 1939, page 34. A *Time* Magazine interpretation of studies by L. M. Spencer and R. K. Burns. Deductions from Science Research Associates.

that almost all are easily adopted as a part of one's behavior by the individual who seriously undertakes such adoption.

A maladjusted person is one who cannot get along with other people. Getting along with other people is one of the big jobs of the school teacher. Studies of teacher failure list *inability to discipline* and *inadequate personality* as major causes. The teacher must guide, direct, and control others and at the same time maintain the respect of his students and of the citizens of the employing community.

Conscious effort toward adjusting one's personality for greater success in teaching necessitates, as a preliminary step, self-analysis. One must know his weaknesses before he can intelligently undertake self-improvement. Teacher rating scales of many kinds are available. Most modern texts on teaching methods and supervision include samples of various rating devices.[2]

HOW GOOD A TEACHER ARE YOU?

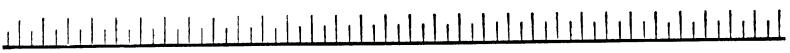
Research seems to indicate that the factors in the following scale are associated with teaching success. Not all are equally important, but a high general rating is probably somewhat indicative of success in teaching. Rate yourself as carefully as you can, keeping in mind the fact that studies reveal a tendency for most people to overrate themselves. Put a check-mark at the approximate point on the line that seems most nearly to describe you.

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[2] Consult Barr, A. S., Burton, W. H., and Brueckner, L. J., *Supervision*, Chapters IX and X. New York: D. Appleton-Century Company, 1938.

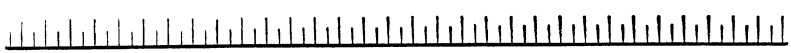
SAMPLE RATING DEVICES

Length and Continuity of Interest in the Profession



Have had long and continued interest in becoming a teacher. Possess deep interest in community, pupils, profession, learning.	Decided in college to be a teacher; have grown interested in the field since I took it up.	Am using teaching as a stepping stone; just a temporary interest.	Forced into teaching by circumstances; it has little interest for me.

Stamina and Persistence in Academic Work



Hard courses have always been a challenge to me. I took more than two years of foreign language or Science, and never have changed to another course just because it was easier.	Dropped some difficult courses because they did not interest me. Am inclined to change courses rather than work long and laboriously at a subject.	Worked hard by spells but not continuously through a course. Do not believe in doing much homework.	Have refused to let my studies interfere with my education.

FIG. 8. RANK-LIST OF TEACHER'S TRAITS

Extracurricular Experience

Spent all possible spare time in wide variety of extracurricular activities such as: Fraternity or club activities; Leader or participant in group organizations for music, journalism, athletics, or other activities.	Allotted some time to extracurriculars. Was an important cog in a few and an occasional leader.	Belonged only to a particular group and was not a leader. Seldom took part in extracurriculars. Had some informal group associations.	Participated in no club life. Was member of no fraternity; athletic, music, forensic, or other group organizations.

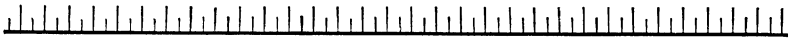
Professional Equipment

Have always rated high in class and examination; have carried extra work; have taken more than required number of hours of professional courses; am planning to continue graduate work in summer schools.	Am average student; made above-average grades in professional subjects; carried extra hours occasionally; may go to summer schools but shall not work hard at them.	Below in other subjects but average in professional courses; will take what graduate work seems necessary to hold job; had difficulty carrying enough hours to be certified in minor fields.	Most of grades below average; carried no extra hours; have no additional units above requirement for certification in professional courses; plan to enjoy a vacation, not go to school in summer; have only one minor on my certificate.

FIG. 8 (*Cont.*). RANK-LIST OF TEACHER'S TRAITS

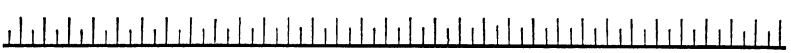
Personal Equipment (1–3, inclusive)

1. Intelligence



Am high in intelligence as indicated by ease at which I can learn new things, remember what I have learned, see the significance of facts and experiences; possess good common sense, get along well with people.	Work hard to learn but remember what I have learned; friends think I have good common sense and judgment; am neither friendly nor unfriendly; kindly but not very tactful.	Have to work hard for everything I learn; about average judgment; make few friends.	Slow learner, impetuous, not appreciated by my associates; rarely make friends; frank and outspoken.

2. Force, Color, Temperament



Am magnetic, forceful, stimulating, full of energy and enthusiasm; tend to be witty and optimistic.	Have forcefulness and energy but little color; my wit tends to be dry and my optimism tempered with cynicism.	Have spells of energy, forcefulness, enthusiasm; fluctuate from optimism to pessimism, from good humor to bad; have spells of boredom and discouragement which reflect in my work.	Tend to be neutral in personality; have little forcefulness and enthusiasm; am inclined to be serious and pessimistic.

FIG. 8 (*Cont.*). RANK-LIST OF TEACHER'S TRAITS

3. Dignity, Poise, Self-Control

My manner is dignified; possess unusual poise and self-control.	Usually dignified; average in poise and self-control.	Tend to be undignified, impulsive and careless about manner and physical aspects but can assume dignified social manner and poise when it seems necessary.	Avoid appearance of dignity and poise; feel that such appearancestamps one as a pedagogue—as one lacking in youthfulness. Dignity belongs to old age.

Attitude toward Students

Appreciative pleasant sympathetic patient impartial human friendly companionable helpful	Adjectives at left describe me in general, but I have an occasional mood when I veer toward the other end of the scale.	Tend to be midway between these extremes.	General pattern of my behavior described by adjectives to right but in a mild degree only.	Not helpful overbearing "hard-boiled" stubborn impatient discourteous partial grouchy cross

FIG. 8 (*Cont.*). RANK-LIST OF TEACHER'S TRAITS

Careful self-rating on the above scale may point out an individual's particular weaknesses and indicate points of emphasis for self-improvement.

Analysis by questionnaire. Devices for self-rating such as the above scale are designed to focus the attention of the individual on important phases of personal and professional equipment and behavior. The use of such instruments tends to make the self-analysis more accurate. Rating devices may be made up in the form of a questionnaire. A questionnaire listing most of the factors reported by Barr [3] as being involved in teacher failure follows:

1. Do you know a variety of devices and techniques for teaching each particular activity unit so that you may adjust your teaching to student individuality and difficulty; or must you rely chiefly on the one method used by the teacher who taught you the activity?
2. Can you maintain discipline? Do the activities and routines of your students progress in an orderly and efficient manner; i.e., without confusion, mischief, and "horse-play"? Do you obtain attention from your students with little noticeable effort?
3. Do you know your program well enough to add supplementary and enriching material whenever the addition lends improvement?
4. Do you know approximately what level of improvement should be expected of your particular students in the light of approved standards and of the individual abilities of your group?
5. Do you work industriously and enthusiastically?
6. Are you self-reliant, enterprising, and adaptable in fitting your program and ways of teaching to your community and its facilities?
7. Have you the physique, health, and energy to do a good job of teaching?
8. Have you so many outside interests that you have insufficient time to do a good job of teaching?
9. Do you do inferior work because you are dissatisfied with your present job and are always looking for a better position?
10. Is your social background sufficiently rich so that the students look up to you as an example of social polish, good taste, and culture?

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[3] Barr, A. S., Burton, W. H., and Brueckner, L. J., *Supervision*, pages 359–360; also consult Chapters IX and X. New York: D. Appleton-Century Company, 1938.

11. Are your moral standards such that parents are willing for their children to imitate you?
12. Is your personality stimulating, forceful, and attractive?

Individuals differ in degree in the traits listed in the rating scale and the questionnaire. If one feels that he rates below average in any of these traits, he should take steps to improve himself in that particular trait. However, success is likely to be due to a combination of traits rather than to any particular trait. Two teachers may vary tremendously in certain characteristics, and yet both be successful. Careful self-analysis usually makes evident possibilities of improvement in the best of teachers.

Self-analysis as revealed in effectiveness of teaching. One may analyze his own functional efficiency by focusing on the results of his work; *i.e.*, the progress of the students in learning. Here are a few suggestions:

1. Make measurements and tests of students which can be compared with measures of students from other years; or which may be compared with evaluations made by other teachers in the same field.
2. Analyze evidence of student interest by examination of such factors as student voluntary effort, extra student time spent in the activity, student enthusiasm, and student rate of learning.
3. Estimate degree of student comprehension and approval of major objectives.
4. Visit classes of successful teachers in the field and compare the evidence of progress of their students with same type of evidence as revealed by one's own students.
5. Examine your own program, materials, and teaching environment. Determine whether any practical modifications can be made that will facilitate student learning.
6. Make a careful examination of all your personal *disciplinary techniques* to see if they are selected entirely on the basis of whether or not they are the *most effective means of fostering student learning.*

Outcome check lists. Forethought and careful planning are characteristic of good teaching. The teacher plans the environmental stimuli which he thinks will produce certain

desired responses. If the plan includes a list of desired student responses, the actual responses can be checked off on this list as they occur, or immediately following the activity period. Such check lists make available exact facts, and therefore increase the objectivity of the self-analysis through teaching results. Some teachers ask a colleague, or an adequately trained visitor from outside that particular school system, to do this checking for them. An occasional checkup by an outsider helps the teacher to view his work more impersonally.

Ideally, the school supervisor should be the one to cooperate with the teacher in his attempts at analysis; but inadequately trained supervisors tend to be destructively critical. They make the teacher feel as if he needed to defend himself. Such an atmosphere contains too many emotional elements to be conducive to objective analysis. A trained and understanding supervisor can be truly helpful, particularly in those states where teacher tenure has removed much of the fear from the teacher-supervisor relationship.

Brief summary records of what occurred in each teaching period can be made at the end of the period. These summaries can be analyzed at the end of each teaching unit. Different emphases and different methods may appear advisable after scanning these summaries. A file of such summaries kept from previous years will prove valuable in prevention of former errors, in recall of apt techniques, and the like.

For a more detailed record, the teacher may be able to obtain the services of someone in the system adept in shorthand. The complete stenographic report offers opportunity for a more detailed analysis.

Tests. The teacher who wants to measure some phase of his own ability or equipment for teaching will find many tests available. Instruments designed to measure the following factors can be secured at very little cost:

1. Intelligence.
2. General culture.
3. Teaching aptitude.
4. Professional information.
5. Personality adjustment.
6. Degrees of prejudice in certain directions.
7. Interests.
8. General knowledge of a particular field.

The superintendent's office, the state department, professional educators in the universities, and book publishing companies will furnish the teacher detailed information relative to the above measuring instruments.

SELF-IMPROVEMENT

Self-analysis is futile unless it is followed by efforts at self-improvement. After the teacher discovers his particular weaknesses, he can set up for himself improvement standards. With these standards set up at desired attainment levels, he proceeds to formulate plans for achievement of these defined levels in his improvement. He can now measure his progress in terms of approach to the specified standards.

Interest in the profession. Suppose the teacher finds that he ranks middle or below in "Interest in the Profession." How can he achieve an interest and enthusiasm which is essential to happy and successful teaching? Interest seems to grow with knowledge of and insight into the field. New ideas add to interest. New possibilities of attainment dawn on one. But this growth of interest is dependent on voluntary effort on the part of the teacher. He needs graduate work under teachers who can inspire. He needs to surround himself with professional magazines and books. Some of these should be of a general nature and some should pertain to specific courses in the field in which he is teaching. He should attend meetings of his colleagues to trade ideas and to

sense other philosophies. He should examine the field in the light of his own potentialities to determine directions for success, achievement, and promotion.

Stamina and persistence can be learned in graduate school or in private study. Most adults find it easier to learn serious work habits by taking "stiff" but worth-while courses in their field under competent instructors—instructors who both stimulate and exact from their students serious effort and a high quality of work.

After the teacher has gained valuable experience in serious, intensive, and extensive study, he may undertake projects of his own. These may entail such activities as careful and intensive reading of new books in his field; construction and revision of a course of study in the light of all available information; or the writing of articles, a master's paper, or a thesis for an advanced degree. The self-discipline of the master's paper and examination should be sought by the teacher. Master's degrees for the completion of a certain number of credits give too little training in stamina and persistence.

Extracurricular experience. The value of high rating in extracurricular experience lies in its diversity of training. Leadership, socialization, diversity of recreational interest, extroversion, and good personal mental health are probable resultants. In addition, teaching duties usually include work with extracurricular activities. The teacher really learns to know his students when he mixes with them in the extracurricular life of the school.

That teacher who rates low in extracurricular experience can develop this side of his personality by: (1) assisting at school extracurricular activities; (2) becoming an enthusiastic spectator at such activities when his assistance is not needed; (3) participating in recreational and leisure-time community activities such as softball and bowling team contests, dramatic

and music club work, and community service club meetings.

Professional equipment. Most of the suggestions for improvement, listed under "Interest in the Profession" on page 595, are equally applicable here. Graduate work, independent study, habitual reading of the best magazines in one's field, perusal of new texts, and an intimacy with basic principles of teaching and learning—all these help one to grow in the profession.

Personal equipment. Intelligence is a product. One becomes more intelligent as he learns more and better ways of reacting and adjusting. This statement is applicable, for example, to selection of an appropriate technique of teaching. The teacher who has learned several possible techniques and has experimented with them is, therefore, more intelligent about choosing the technique to fit the new situation. The teacher who has adjusted to a variety of social situations in his extracurricular experience in the past is, therefore, better fitted (more intelligent, socially) for adjusting to a new social situation. The teacher who has studied until he has a rich background in the field can make a better selection of material for his needs than he could without this background.

Someone has said: "We do not know unless we know *something*." The credits filed in the registrar's office back at the college are of no use to us out on the job if we can no longer remember the content of the courses. Mere exposure to content that leaves one unchanged is not education. One's personality must change, must grow. Education is growth; and one can continue to grow in social and educational intelligence as long as he fosters this growth by social and educational experience.

Factors contributing to magnetic, forceful, and stimulating teaching. Deep interest in a field leads to enthusiasm. A rich knowledge leads to self-confidence. Social experience develops one's poise. Care in selection of teaching tech-

niques, in development of one's voice, in choice of language —these are factors in dynamic teaching. Neat and suitable dress and grooming add to one's mental poise. An understanding of the students, of their interests and their experiences, will suggest cues to use in vitalizing the material to be learned. Curiosity about the material to be learned can be aroused in the students by careful planning. The units can be organized so that learning is progressive and so that interest grows.

An analysis of outstanding characteristics of great teachers indicates that most of them are saturated with their subject, forceful in voice, energetic in action, and lucid and graphic in language of expression. Saturation means persistent study; forceful voice comes with practice and training; energy [4] improves with health, recreation, and interest; and language facility is a skill dependent on practice and particular focus of attention.

Attitude toward students. School club meetings, athletic squad practices, school social affairs, student conferences, activity periods, homeroom periods, and the like, are situations wherein the formal atmosphere of the average classroom gives way. It is in situations of this kind that the students reveal themselves to the teachers as personalities and individuals. Teachers who lack self-confidence and who fear discipline problems hesitate to avail themselves of these opportunities to get better acquainted with students. Lack of self-confidence makes them reserved; fear of discipline problems makes them suspicious and impatient; and lack of understanding makes them unsympathetic with the student. The teacher who understands students can maintain a sufficient degree of dignity and reserve even while he is joining them in their enthusiasms, interests, and fun. He can be sympathetically understanding without reducing his behavior to the

[4] Note the importance of the energy factor, page 374.

"teen-age" pattern. Understanding the students brings an affection for, and an interest in, them. It produces a camaraderie which carries over into the shared interests in learning.

Summary. Self-analysis is the first step in self-improvement. Some devices valuable for self-analysis are: rating scales; tests of aptitude, of intelligence, of professional information, of general culture; questionnaires designed to measure interests, prejudices, and personality adjustment; check lists for activities covered and time consumed per activity. It is also recommended that the teacher keep files of procedures, results, and evaluations for each teaching unit, accompanied by brief notes as to possibilities of future improvement. Worth-while, constructive criticism may be gained from colleagues, supervisors, and competent friends.

After analyses reveal weaknesses, the teacher begins the program of self-improvement. It may be through graduate study, through wide reading, or through enlargement of one's social, extra-curricular, and recreational experience. Educational writing and speaking offer opportunities for growth for the teacher who is willing to undertake such projects. Professional organizations offer opportunities for exchange of ideas, acquaintance with new viewpoints, and renewing of interests.

Self-diagnosis of our equipment for teaching will reveal malnutrition and developmental retardation in most of us. The nourishment essential for growth is all about us. The vitamins of interest in the profession and of urge to improve may have been lacking. The proteins of social experience may have been neglected. The carbohydrates, the subject matter of our field, may have been hastily and scantily eaten and poorly digested. Perhaps the error lay in improper balance in our dietaries.

Improvement is change, is growth. When the teacher discovers his weaknesses and sets out to remove them by carefully planned regimens of nutritive experiences, he has already

shown much evidence of growth. The initiation of a plan of intelligent self-improvement indicates progress toward professional maturity. The persistent prosecution of the plan toward its realization is the incubation of greatness.

SAMPLE TEST ITEMS

Yes-No

1. Is personality predetermined by heredity?
2. May one change his own personality by a planned series of self-improvement activities?
3. May the teacher who finds himself uninterested in his chosen field develop a real interest in that field?
4. Are there objective measures which will help the teacher in self-analysis?
5. May the teacher profit in personality from association with school extracurricular activities?
6. Does the progressive teacher's self-education ever stop?

PART VII REVIEW TEST ITEMS

Yes-No

1. Is the degree of validity of a test dependent on the objectivity of the test?
2. Is it a relatively simple problem to isolate a trait for measurement?
3. Can one measure a complex human trait by measuring some of the individual's reactions to certain stimuli?
4. Is the ratio between strength and physical condition constant?
5. Does the ratio between strength and physical condition need to be constant if physical condition is to be measured by the substitute factor of strength?
6. Is a measure of *present ability level* a safe estimate of pupil potentiality?
7. Is a standard test in physical education, devised for classification of pupils, likely to be of equal classification value for a formal program, and for a program based on games, sports, and the dance?
8. Should the teacher expect to bring all pupils up to the norm of the standard test?
9. Does the establishment of national norms for an activity prove the value of that activity to the individual pupil?

10. Should the physical education teacher use test items from standardized tests as the criteria of his pupils' needs?

11. Should tests be mutual teacher-pupil measures of progress toward objectives philosophically determined?

12. Should the same standardized test be used for purposes of diagnosis, of teaching, and of grading?

13. Can progress toward the major objectives of physical education be measured objectively?

14. Is it advisable to excuse pupils from physical education who rate in the upper quartile in standardized skill tests?

15. Should the emphasis of teaching be upon pupil acquirement of present, fractional, measurable, partial reactions to test items?

16. Is scientific measurement concerned with purpose, value, and consequences of physical education?

17. Need the teacher who measures accurately be concerned about what he measures?

18. Is the estimated value of measurement philosophically determined?

19. Is the potential growth and development of the child something which exists, which exists in some amount, and which can be measured?

20. Does the prestige of tests long established in the physical education field tend to retard movement toward new practices, programs, and objectives?

21. Does measurement take into account what happens to the *whole* pupil when he participates?

22. Should the teacher attempt to construct his own tests for instructional purposes?

23. Is there much value in getting the pupils to work at construction of their own local tests?

24. Are the test items in a diagnostic test the same in nature, arrangement, and difficulty as in the achievement test?

25. Is the accuracy of the test as a measuring instrument a good criterion by which to judge its validity?

26. Should the major purpose of all local testing be the measurement of achievement?

27. Does a *norm* mean the average score that should be made by the pupils in your school?

28. If the teacher were to construct an achievement test, should he arrange the test so that the average score would be about 75, and so that a few pupils could make a nearly perfect score?

29. Is the basis of most grading some absolute standard of achievement?

30. Does the pupil's grade partially depend upon the ability of the other members of his class?

31. Is the accomplishment quotient the most desirable basis for individual pupil grades?

32. Should the pupil's grade be emphasized so that it will be a major incentive?

33. Is personality maladjustment a major factor in *teacher* failure?

34. Is personality to a great degree inborn and unmodifiable?

35. Can one readjust his own personality if he so desires?

36. Are there devices available, the use of which will greatly assist the teacher in self-analysis?

37. Has undergraduate interest in the teaching profession any relationship to success as a teacher?

38. Should the teacher vary his techniques of teaching instead of teaching the activity by "one best method"?

39. Should the teacher attempt to plan much of his discipline technique ahead of time?

40. Is breadth of information in the field an important factor in teaching success?

41. Is it important for the physical education teacher to possess a high degree of social polish, good taste, and culture?

42. Should the moral standards of the physical education teacher be such that parents would desire their children to imitate in conduct their physical education teacher?

43. Is it desirable that activities be conducted so that pupils are reluctant to stop at the end of the time allotted?

44. If the pupils are enjoying an activity, does it make any difference whether they understand values that may come from the activity?

45. Is the purpose of discipline the acceleration of learning?

46. As a general rule, are school supervisors of great assistance to the teacher in his attempts at self-analysis?

47. Does interest grow with knowledge of, and insight into, the particular field?

48. Is there real practical value to the teacher in writing a Master's paper—assuming the graduate school offers the alternative method of attaining the Master's degree by credit and examination without the paper?

49. Can one by his own individual efforts become a more *intelligent* teacher?

50. Can the teacher become by his own planned efforts more dynamic, more forceful, more magnetic in teaching personality?

51. Assuming that a pupil is normal, would his failure then be due to school or teacher inefficiency?

52. Is bluffing best stopped by careful evaluation?

53. Is pupil achievement of outcomes best tested by the application to life situations?

54. Can most teachers be highly efficient and still not know how to measure the results of their work?

55. Are daily marks the best criteria of pupil learning and retention?

56. Should the teacher record a grade in his gradebook following the performance of each pupil?

57. Is frequency of teachers' marks the best determiner of reliability?

58. Are the best examinations those which test pupil ability to apply material learned?

59. Should absence and tardiness lower the grade of a pupil even if his actual accomplishment is very high?

60. Can prognosis, diagnosis and achievement testing be effectively done by the same test?

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The teacher interested in further study and research in his field will be concerned about sources. Carter Alexander's *How to Locate Educational Information and Data* should be of help. The *Educational Index* is perhaps the best general guide to educational sources. *Psychological Abstracts* will be found to be of advantage in locating studies of learning. The *Research Quarterly of the American Association for Health, Physical Education and Recreation* is the best physical education source. It includes annually extensive bibliographies in the field.

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