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#### A PHILOSOPHY OF PHYSICAL EDUCATION

AND

# ITS APPLICATION TO SWIMMING

Submitted in Partial Fulfillment of the Requirements for the Course Philosophy of Physical Education, P. E. 563, and for the Master of Science Degree

by

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#### PREFACE

The purpose of this paper is threefold. The first purpose is to justify the place and function of physical education in the whole field of education. From past experiences we know that physical education cannot operate at its optimum worth if it ignores the other aspects of education and teaches only physical activity. It must fit in with the complete program if it is to meet the needs and interests of people. Conversely, education cannot be considered as being complete if one part is segregated from the total. Thus we will attempt to show that physical education is a vital part of the integrated whole that is called education.

If physical education is to be a part of the total education of an individual, then the second purpose is to develop a philosophy, which if used, will bring about a worthwhile program of physical education that will aid in the total development of the integrated individual.

The last purpose of this paper will be to apply this philosophy to one area of physical education in order that we may see this philosophy as it applies to one area of the actual program. The individual will develop into a worthwhile person if he can develop physically, socially, mentally, and emotionally. With this criteria in mind I have chosen the teaching of swimming because it provides one of the better opportunities for this development of the individual.

#### WHAT IS EDUCATION?

Physical education can make a worthwhile contribution to the educational process. In order to prove this, we must first find out what education is and what its purpose and objectives are.

What is education? Education means many things to many people. Although we are educated by everything we experience in life, most people do not use this connotation in defining the word "education". When we think of education, we usually think of formal education rather than informal education. Formal education is usually referred to as general education to distinguish it from education in a specific area. This formal education that we receive in the classroom should give us the type of knowledge we need to cope with situations as they arise. In an article called Nature, Scope, and Essential Elements in General Education, Henry Wriston has given the following definitions of general education:

The word "general" seems to have a double meaning when used in this phrase. It appears to refer, upon the one hand, to an education made available to all—or to as nearly all as possible—of our citizenship. It is general in the sense that we speak of "compulsory education", as though there could be such a thing. At least it is our conception of what must be supplied to meet a universal need of children and adults.

The second meaning implied in the word has to do with the nature of the education provided. It seems manifest that, in this connection, the word "general" identifies a quality inherent in the education under discussion; it does not and cannot give any measure expressed either in time or in quantity....

What, then, is the quality we seek to identify by this phrase? It is universal validity—an education useful to all who possess it, at all times, and under all circumstances. There must be common elements or qualities sufficiently significant, intrinsically, so that we may properly segregate

them from elements or qualities which have specific values only, or particular validities. These basic elements must be so vital in character, so unchallengeable in validity, that we may fairly insist that everyone should have the opportunity for general education, and that whoever has a general education, properly so described, is effectively equipped for living in a sense in which he would not be equipped without it.1

The second definition of general education by Henry Wriston is the one which we, as educators, accept as the actual definition of the term.

James Mursell, in his book <u>Principles of Education</u>, gives a briefer definition of general education which concurs with the idea that education is to teach the individual how to cope with all situations. "The aim of education, as a process of readjustment, is to produce fitness for the problems of life."<sup>2</sup>

Thus we see that education is a never ending process through which we gain the necessary experiences in order to cope with life's problems. Education is no longer thought of as an accumulation of facts, but rather how these facts can be applied in problem situations. Education may also be considered as life itself. Either way, a person's education is never completed. There is always more to be learned. New situations and problems are constantly arising which must be solved. In an article by Louis Wirth we find certain ideas presented in support of this theory:

We believe that a general education should deal with the whole person--or, as the recent report of our curriculum committee put it, with men and women as knowers, actors, and

<sup>1</sup> Gray, Wm. Scott, ed., General Education (Chicago, The University of Chicago Press, 1937), pp. 1-2.

<sup>&</sup>lt;sup>2</sup> Mursell, James L., <u>Principles of Education</u> (New York, W. W. Norton and Company, Incorporated, 1934), p. 7.

appreciators. When we say, then that the object of a general education is to aid the student in seeing the world whole, we are not merely uttering an empty rhetorical phrase. We mean that we are aiming to present the world and man's knowledge of it as nearly as a unity as the best of present-day scholarship allows us. To this end we want our students to be acquainted with the best that has been produced in the past and in the present and to be able to think independently and clearly about it....

This general education, while it is never truly a substitute for life and experience, cannot and does not proceed in an academic vacuum. What is involved is not merely adjustment to the social order but readjustment of the social order. Hence, we seek to stimulate and facilitate the student's intimate contact with the real world in which he lives, first, by making the problems with which we deal as lifelike as possible, and second, by encouraging his own initiative, sense of responsibility, and participation in the life-situations in and outside the classroom. In this way we put his creative and problem-solving power to the test of life-experience. Under conditions of freedom one of the tests of a general education will unquestionably consist in the measure of self-discipline the student has acquired as a result of exposure to a program which he is free and encouraged to transform into an opportunity. We hope that our students will come out of this experience with a lively and human interest in the world in which they live (which will, no doubt, be an expanding world), with an appreciation of its problems and of its possibilities, and with a more realistic sense of their own powers and responsibilities.

With these definitions of education, it becomes evident that the process of education is a continual search for knowledge, through wide and varied experiences, which will help us to live life to the fullest degree possible. Any of these definitions must be based on certain principles so that the educational process may be carried on.

#### PRINCIPLES AND OBJECTIVES OF EDUCATION

Principles are statements of basic facts which have been proven to

<sup>3</sup> Gray, Wm. Scott, ed., General Education (Chicago, The University of Chicago Press, 1937), pp. 34-35.

be the goal toward which we strive if we are to meet the needs of the individual. There are many principles stated in various ways in education. The Seven Cardinal Principles of Secondary Education by Baker: Health, Command of the Fundamental Processes, Worthy Use of Leisure Time, Ethical Character, Citizenship, Worthy Home Membership, and Vocation, are the ones most widely known and used. These principles were set up only after extensive research in the field, and although they were set up in 1918, they are still valid and useful guides in education today.

These principles will achieve no goal unless the correct methods are used with them. In order to find the correct methods, we must set up certain objectives toward which we will strive to reach our final goal. These objectives, which must be more specific than the principles so we may understand more of the theory on which they are based, are the guides to direct our thoughts and actions. What should these objectives be?

In the education of the individual, certain desirable outcomes must result. The individual should learn something of past history to find out what has come before so he may better understand events, both past and present. He must develop his reasoning power so he may solve problems and he must develop himself so he may express his ideas and solutions to others. Thus the teaching of facts and skills is for the purpose of applying them during life. Henry Prescott<sup>5</sup> has stated the

Bureau of Education, Dept. 3 of the Interior, Cardinal Principles of Secondary Education, Bulletin #35, 1918 (Washington, D. C., Government Printing Office), pp. 11-16.

<sup>&</sup>lt;sup>5</sup> Gray, Wm. Scott, ed., General Education (Chicago, The University of Chicago Press, 1937), p. 21.

following objectives of education: (1) the development of clear thinking leading to interligent action; (2) the development of clear, convincing, and persuasive expression as the medium of expressing thought; (3) the development of an imagination sensitive to the effects of literature, music, and the plastic arts; (4) the knowledge and understanding of the history of the past and the environment of the present in those respects that vitally affect intelligent activity in our present-day world.

In a broad way these objectives stress knowledge for its use, rather than knowledge for itself. This fact cannot be repeated enough. No matter what we learn, it must be used or it is worthless. In order for it to be used we must be able to inform others about it. From this we can see that accumulated facts, in themselves, are useless.

- C. E. Erffmeyer also gives the following objectives of education:
- 1. Effective communication. First, this is the ability to express oneself effectively, both in speaking and writing so as to be understood by others. Secondly, it is the ability to listen and read with critical intelligence.
- 2. Acquaintance with values and ability to discriminate among them. Among these values are the intellectual, the aesthetic, and the moral. Intellectual integrity and the worthwhileness of intellectual activities are to be emphasized. Good taste and the appreciation of beauty are to be fostered. Moral standards are to be developed.
- Responsibility to the local, national, and world community. Education must develop an active sense of responsibility for good citizenship in all these areas so that the individual will (a) regulate his own personal and civic life in harmony with democratic ideals, and (b) participate actively (even as a student as far as personal circumstances and the resources of the school will permit) as an informed and responsible citizen in solving the social, economic, and political problems of the local, national, and world community. The good cit-

izen is not one who always agrees with the accepted purposes and patterns of his community; he is one who through informed and creative criticism helps his society to correct its shortcomings.

- 4. Ability to participate in a successful and satisfying family life.
- Worth-while use of leisure time. This aim will be partly realized as the student achieves the aims already
  listed. The greatly increased leisure of the new generation, however, means that the student should, in
  addition, be helped to understand and enjoy literature,
  art, music, and other cultural activities, and be encouraged to participate in some form of creative activity.
- 6. Critical and imaginative thinking. General education must seek to cultivate generalized habits of reflection and the processes of reasoning employed in reaching valid conclusions. Some educators regard this as the most important contribution general education can make to the lives of students.

In referring to the definitions of education and its principles, we see that these objectives carry out their ideas in a general way. They are even more specific than those of Prescott and give us a greater insight into what must be done in education if the Seven Cardinal Principles are to be realized and knowledge gained which will enable us to cope with life's problems. Even though these principles were established long ago, we now see that they are still used in setting up modern goals of education.

Educational methods may change. There are constantly new methods arising but the principles behind the methods have remained constant for years. No matter how we try to achieve it, education is still, and al-

<sup>6</sup> Erffmeyer, C. E., Objectives of General Education, Current Issues in Higher Education, 1950, Department of Higher Education, N. E. A., Washington, D. C., c. 1951, pp. 68-69.

ways will be, for use in life. Some educators consider education as life but, in my opinion, how we use knowledge determines how we live.

DEVELOPMENT OF EDUCATION'S AIMS IN THE FIELD OF PHYSICAL EDUCATION

Having summarized the purpose of education, and what it means, the basis for proving our first purpose (to justify the place of physical education in the whole field of education) has now been established. In order to prove the statement, however, we must, as with education, find out just what physical education is and what its purpose and objectives are.

# WHAT IS PHYSICAL EDUCATION?

What is physical education? Is it education of the physical, or is it education through the physical? To many people, it is education of the physical, but it must be understood that, if physical education is to be a vital part of education, it must be education through the physical. Physical education, naturally, is vitally concerned with the physical development of the individual but it cannot be concerned with the development of the physical structure alone. Just as other fields have their methods of education, physical education uses the physical aspect as a method to educate the total individual. While we develop the physical aspect we also use that method to develop the other aspects of the individual. The physical aspect must not be neglected for these other aspects but it must be integrated with them if it is to achieve its full value. To substantiate the claim that physical education is education through the physical we have included two definitions of physical

education and their explanations. The first definition is by Charles A. Bucher:

Physical education is an integral part of the total education process and has as its aim the development of physically, mentally, emotionally, and socially fit citizens through the medium of physical activities which have been selected with a view to realizing these outcomes. This definition implies that well-organized programs of physical activities, under qualified leadership, will help the growth and development of individuals by improving the coordination of their nervous and muscular systems, by improving mental perspective, and by aiding individuals in group and other social adjustments which are conducive to successful group living. Physical education is closely allied to the larger area of education, of which it is a vital part. It consists of more than exercises done to command, or varsity sports. It refers to the process of education which occurs when one is concerned with activities which develop and maintain the human body. This education, under qualified leadership, is conducive to the enrichment of the individual's life. It is not an appendage to school and agency programs; instead, it is a vital part of education. Through a well-directed physical education program, children and adults develop skills for the worthy use of leisure time, engage in activity which is conducive to healthful living, and develop socially. When an individual is playing a game, swimming, marching, working out on the parallel bars, skating, or performing in any of the gamut of physical education activities which aid in the development and maintenance of the body. education is also taking place. 7

The second definition is by Clifford Brownell and E. Patricia Hagman:

Physical education is the accumulation of wholesome experiences through participation in large-muscle activities that promote optimum growth and development. By this definition the authors establish immediately the connecting bond between physical education and education in general and, at the same time, recognize the unique contributions of physical education to the welfare of the individual and to society. In the final analysis, physical education, like all education, seeks enrichment of personality capable of adjusting to the realities of environment. Physical education is not concerned alone with motor learning; it relates also

Recreation (St. Louis, C. V. Mosby Company, 1952), p. 22.

to a variety of knowledges and understandings about physical experiences that enable the individual to formulate social and aesthetic judgments of inestimable value in a democratic society.

These definitions show that, contrary to popular beliefs, physical education is concerned with the total individual. In the informal physical education situation, the true personality of the individual will come forth. The informal situation also allows for more social development than is possible in many situations. Although we are concerned with physical development, it is not our main concern. It is merely a means to an end. Our main concern is the development of the individual. If handled correctly, this informal situation in physical education can be used to develop the individual into a well-rounded person.

#### OBJECTIVES OF PHYSICAL EDUCATION

Throughout these definitions certain phrases stand out, i. e.,
"large-muscle activities", "mental perspective", "coordination of nervous
and muscular systems", and "successful group living". It is in these
phrases that we find the basic objectives for physical education. Physical education is obviously concerned with physical activity and the development of coordination. It is also concerned with mental and social
development. Use of student captains and leaders, the use of group process in planning program needs, and an understanding of and practice in
the use of rules and how to make decisions are all methods which can be

Brownell, Clifford L., and Hagman, E. Patricia, Physical Education—Foundations and Principles (New York, McGraw-Hill Book Company, Incorporated, 1951), p. 17.

used to aid in this development. In the education of the individual, physical education thus tries to develop skill and performance, improve health, develop social attitudes by working with others and develop reasoning processes. In addition, physical education is supplying recreational activities for use now and in the future.

Charles Bucher, in his book <u>Methods and Materials in Physical Education</u> and <u>Recreation</u>, quotes Hetherington's objectives for physical education as (1) Organic development (2) Neuromuscular development (3) Interpretive development (4) Emotional development. Bucher has restated and enlarged upon these objectives:

The physical development objective is concerned with the physical power that is built in the individual through participation in a program of physical activities....

The motor development objective is concerned with cutting down waste motion, with the performance of physical acts in a proficient, graceful, and esthetic manner and with utilizing as little energy as possible in the process....

The mental development objective deals with an accumulation of knowledge essential to enriched living and the ability to think and to interpret situations which are continually encountered in day-to-day living....

The human relations objective is one of the main contributions of physical education to modern-day society. Through physical activities the individual under qualified leadership can be aided in making personal adjustments, group adjustments, and adjustments as a member of society.

The education of the individual, so that the body can be used to the fullest extent possible, is the goal of physical education. The use of the body does not apply to the physical alone, but it also applies to the

Bucher, Charles A., Methods and Materials in Physical Education and Recreation (St. Louis, C. V. Mosby Company, 1952), p. 176.

<sup>10 &</sup>lt;u>Tbid.</u>, pp. 23-24.

mental and social parts of the body. Physical activity is the means by which this is accomplished. In the physical activity program the individual is encouraged to develop coordination in his movements and to develop physical power and control. At the same time he is encouraged to contribute his ideas to the group and learn to work with the group. From this we see that physical education, if well organized, is concerned with educating the total individual, and not just the physical part.

#### INTEGRATION WITH EDUCATION

Definitions of education and physical education have been given.

The objectives of education and physical education have also been given.

We are now ready to justify the place and function of physical education in the whole field of education. The statements of the purpose of physical education and education have partially proven that physical education is a vital part of the integrated whole that is called education.

If the purpose of education is to educate the total individual, and the purpose of physical education is to educate the total individual, it follows to a logical conclusion that physical education is an integral part of education.

The education of the physical, social, and mental aspects of the individual have been mentioned. Specifically, however, what aspects of education are included in physical education? John D. Lawther gives his answer to the question of what specific contributions physical education can offer in the field of general education:

The first and sixth of the Cardinal Principles of Secondary Education (1918), "Health" and "Worthy Use of Lei-

sure", pointed directly toward physical education. Others such as "Citizenship" and "Worthy Home Membership", involved certain emphasis in physical education. Mental, social, emotional and physiological health, socio-motor and recreational skills; and physical competency are the objectives of education which are of special concern to physical education.

More specifically, we want the individual to have musculature and suitable posture; i. e., some muscle on his bones and the body mechanics for its most efficient use. We want him to have a body so trained by breadth and variety of activity that it performs with unconscious, perfectly coordinated nicety of control.

We want him to have skills: (1) active skills as tools for cooperative and competitive social activity; and (2) skills for fun, for recreational outlets, for physical self-expression. Finally, we want him to have the knowledge and habits essential for prolonging his own health and fitness. 11

Robert T. Kretchmar presents a slightly different viewpoint on the contributions of physical education to education:

Today, more than at any time in the past, teachers of physical education are aware of the relationship between what they are doing and the purposes of general education. Unfortunately, some teachers see no such relationship.

We are making a fine contribution to general education by equipping children with sport skills and knowledges that will make possible a lifetime of wholesome satisfying social experiences. Experiences on the athletic field or in the gymnasium are an integral part of our social scene and as conducted in many schools are an experience in democratic living. This is not a preparation for living. This is life. 12

According to these people, physical education contributes to most of the Seven Cardinal Principles, either directly or indirectly.

"Health", "Worthy Use of Leisure Time", "Citizenship", and "Worthy

<sup>11</sup> Lawther, John D., "Basic Issues", <u>Journal of Health Physical Education</u>, and Recreation (January 1957), p. 35.

<sup>12</sup> Kretchmar, Robert T., "Basic Issues", <u>Journal of Health</u>, <u>Physical Education</u>, and Recreation (January 1957), p. 36.

Home Membership" have already been mentioned as being developed in physical education. Activity which helps keep the body in good condition and an understanding of body functions are applications of the "Health" principle in physical education. The development of skills in the program will provide a knowledge of skills which can be used in recreational activities for "Worthy Use of Leisure Time" with friends and family. Enjoyment of these activities with others, and learning to cooperate with others while playing, leads to a social adjustment which results in good "Citizenship".

In addition, "Ethical Character" is developed in the individual through emphasis on good sportsmanship. Good sportsmanship means that the individual understands the need for rules and willingly abides by them. These rules may be rules of the game or rules of society. Use of the principles of education in physical education shows that physical education must be a vital part of the total educational process.

#### STATEMENT OF PHILOSOPHY OF PHYSICAL EDUCATION

By using these objectives, it is possible to build a sound philosophy of physical education which, if used, will greatly improve our own program of physical education. Such a philosophy will also contribute much to enriching the program of general education, and ultimately society. With this in mind, we have formulated the philosophy of physical education that is stated below.

Physical education, through total-body activity, should be the means of expression by which the individual is given the opportunity for guidance toward physical, social, emotional, cultural, and spiritual advance-

ments. In all activities the individual should be encouraged to retain his individuality. The individual should develop a feeling of personal worth and responsibility, but in this process the individual must also be taught to contribute to the desires of the group. In this way he may become a person integrated in the group and able to make worthwhile contributions to the group. Cooperation of the individual with the group is the essence of our democratic society.

### BASIC FACTS AND PRINCIPLES FOR PHYSICAL EDUCATION

A statement of philosophy of physical education has now been made. No such statement can be made without some facts on which to base it if it is to be worthwhile in its purpose of guiding our course of action. What is the basis for such a statement? Any good philosophy is based on facts and principles which have been scientifically proven and accepted in the field of physical education.

If we are to educate the total individual as expressed in the philosophy, then the principles must cover every aspect of the individual's development. These aspects will naturally include the physical, the mental, and the social.

According to Solon Sudduth a physical education program is sound if it is founded on the following criteria:

The physical education programs in our schools must be available to all pupils and students. They must be planned in a progressive sequence based upon the needs, interests, and abilities of youth. Three basic criteria are necessary in planning: (1) The programs must be physiologically sound, (2) The programs must be sociologically sound, and (3) The programs must be psychologically sound.

By applying the criteria suggested above, along with other

criteria, physical education can assume an important place in the total education program and can make significant contributions to the development of skills, attitudes, competencies, and understandings and knowledge that each citizen in a democratic society should possess.<sup>13</sup>

Keeping the above criteria in mind, as well as the fact that physical education is concerned with the total individual, we have placed our principles in the following groups: biological, psychological, and sociological. The following principles were obtained from discussion in the course, Philosophy of Physical Education. 14

#### BIOLOGICAL PRINCIPLES

- The body needs movement in order to operate and develop fully.
   Therefore, an activity program should stress the importance of movement.
- 2. Big muscles develop before small muscles in the body. Therefore, the first activities taught should be those which involve the use of big muscles.
- 3. Muscles develop through overload. Therefore, all activities should call for some capacity effort.
- 4. Muscles develop through use. Therefore, activities should provide for the equal use of all muscles.
- 5. Capacity varies with each individual. Therefore, the individual should compete at his own level.

<sup>13</sup> Sudduth, Solon B., "Basic Issues", Journal of Health, Physical Education, and Recreation (January, 1957), p. 35.

<sup>11</sup> Course, Philosophy of Physical Education, Physical Education 563, Instructor, Dr. Haight, Eastern Illinois University, Charleston, Illinois.

- 6. The body needs time to recover. Therefore, each activity should contain a rhythmmical pattern of an activity period and a rest or recovery period.
- 7. A period of mild activity, preceding a more strenuous activity, will help prepare a person for optimum functioning in a strenuous activity.

  Therefore, a period of warm up is good to tone up the muscles for activity.
- 8. The body stores waste material after strenuous activity. Therefore, a deceleration period is necessary to eliminate waste materials.
- 9. Organic functioning is improved through regular vigorous activity.

  Therefore, activity should be done at regular daily intervals.
- 10. At different stages of growth, bones and muscles are in different stages of development. Therefore, physiological age will determine the amount and kind of activity, and this activity should be suited to the stage of development.
- 11. Coordination is learned through trial and error. Therefore, activities should be repeated.

#### PSYCHOLOGICAL PRINCIPLES

# 1. Laws of learning.

Practice - A person learns by doing.

Readiness - A person learns if:

- 1. He is mature enough for that task.
- 2. The task has meaning and is of interest to him.
- 3. He has had the necessary background.
- 4. It is taught in a learning situation.

Effect - A person learns if:

- 1. The experience is pleasant.
- 2. The experience is satisfying.
- 3. He is given encouragement and confidence.

Use and disuse - A person learns if:

- 1. The activity is repeated and becomes habit.
- 2. The activity is used.
- 2. Theory of transfer.

Skills are specific. Therefore, they should not be expected to transfer from one activity to another, except in those skills in which the basic movements are identical.

- 3. Physical education should use both the whole and part methods in teaching motor skills.
- 4. Activities should be increasingly difficult.
- 5. The activity should provide an opportunity for self-expression.
- 6. Individuals vary in their capacity to retain impressions and make judgments.
- 7. Activities help the individual learn to think by learning the meaning of symbols.

# SOCIOLOGICAL PRINCIPLES

- 1. Man is a gregarious animal. As such he has certain needs. They are: to be liked, to belong, and to feel secure.
- 2. Man must be part of a group. In this group he has certain responsibilities. They are:

To protect the rights of others.

To participate in and contribute to the group.

To accept the majority rule but to respect the minority opinions.

To express his ideas and assume responsibility for his actions.

To accept the standards and mores of the group.

To provide an opportunity for others to contribute and participate.

- 3. Man is a competitive animal. This competition must be controlled by certain rules of sportsmanship.
- 4. Man must have the right to make decisions based on valid reasoning.
- 5. In making decisions man must retain some individuality but also surrender to the will of others. This is democracy in action.

#### SWIMMING AS A PART OF THE FIELD OF PHYSICAL EDUCATION

#### INTRODUCTION

Having established physical education as a part of education, we will now apply the principles, that have been developed, to our selected area of teaching. This area is swimming, one of the more important activities in a well-rounded physical education program.

Swimming is one of our oldest activities. Originally it developed from necessity, but this has become secondary in importance in recent years. As John Torney states:

Nereus, Nicholas, Challong, Don Juan, Scyllias, and a host of others still would not complete a roll call of the swimmers of literature and legend. Suffice it to say that the motives of pleasure, health, adventure, social companionship, utility, and necessity have combined to nurture swimming for eleven thousand years or more.

These same values have imparted to swimming a great significance in the world today. 15

The fact that swimming has endured for so long seems to imply that it is a good, worthwhile activity. Why is it a good activity? To answer this question, we shall try to show how swimming can contribute to the principles and philosophy of physical education and meet the needs of the individual.

Any physical education or recreation program could be greatly improved by including swimming. Depending on age and physical condition, swimming can be either vigorous or easier and more relaxing. Regular

<sup>15</sup> Torney, John A., Swimming (New York, McGraw-Hill Book Company, Incorporated, 1950), p. 2.

habitual practice is necessary to keep the body in condition and to tone up the muscles for more enjoyment in life's activities.

Although more limited, two other areas should be considered. Safety around any water area is vital if accidents are to be avoided. Swimming can also be used in the treatment of injured, crippled, and paralyzed patients. Doctors have found that swimming is invaluable in the treatment of these people. This includes the mental attitude of the patient as well as the improvement in their physical condition.

In addition, it provides an opportunity for recreation and social contact. These same values carry over into adult life. Opportunities for children and adults are numerous. If a community is going to provide for the needs of its members, it should have facilities for swimming all year around.

A discussion of the value of swimming is given by Charles Bucher, in his book Methods and Materials in Physical Education and Recreation:

Any activity to be learned needs to be considered for its worth and the contributions it brings to the individual or groups performing it. One of the great merits of aquatics is that both sexes and all ages may participate in varying degree to their own choosing and temperament without disrupting others' pleasures in participation. From the elementary grades through universities and on to adult life, similar levels of instruction and skills may be learned with little change in procedures, thus giving aquatics a recreational value as well as making it an excellent activity for the school curriculum.

One of the foremost surveys of the importance of swimming and diving is the one conducted by the Committee on the Curriculum Research of the American Association for Health, Physical Education and Recreation reported in the May, 1930, issue of The Research Quarterly. This survey ranks swimming at the head of the list for its physical, safety, and recreational values, with an average rating for its social and psychological values. Perhaps these last two values would receive a higher rating at the present time. The fact that

water activities also have therapeutic value for handicapped persons makes them very valuable skills and treatments for medicative as well as leisure-time activities. 16

More specifically, however, we shall apply the biological, psychological, and sociological principles, we have mentioned before, to the area of swimming.

#### APPLICATION OF THE BIOLOGICAL PRINCIPLES TO SWIMMING

Swimming develops the body through movement. This movement is aided by the support of the water and causes a relaxation of the body except in those muscles which are used to expend the necessary effort for movement. This point is proven by the use of swimming for therapeutic treatments. Claude Ruggian, a registered physical therapist, has made the following statement about the therapeutic value of swimming:

Through swimming, these victims of polio are able to maintain joint mobility and range of motion as well as improve the muscle tone in areas weakened by the attack. With the cerebral palsy cases, the objective is the establishment of co-ordination and relaxation of the muscles through swimming in water that has been heated to 80° to 85°.

Swimming, with its various strokes, seems to offer greater opportunity to use more of the body's muscles than many of the other activities. At the same time, this use of the total body develops another aspect. Use of arm and leg strokes, in order to move through the water

Bucher, Charles A., Methods and Materials in Physical Education and Recreation (St. Louis, C. V. Mosby Company, 1952), p. 36.

<sup>17</sup> Ruggian, Claude J., "Laboratory Training in Underwater Exercises", Journal of Health, Physical Education, and Recreation (May-June, 1956), pp. 14-15.

and to stay afloat, requires the development of coordination between the parts of the body doing the strokes.

Swimming strokes require coordination to develop the vital rhythm which an individual must have if he is to become a good swimmer. Without this coordination, progress will be slight and the effort expended will be exhausting to the person. Because some relaxation is necessary, a tense person will never be a good swimmer. The body needs time to recover from effort if it is to perform well. This opportunity is given in the stroke and glide rhythm of swimming. The stroke is when the muscles contract to do the work; the glide is when the muscles relax and the body can rest. The stroke and glide pace is quickened if one is swimming for speed, and it is slowed down if one is swimming for endurance. The length of the stroke and glide will depend on the person's physical condition.

Swimming may also be an important factor in health and posture.

F. J. Lipovetz in his book, Swimming, Diving and Water Sports, concurs with this statement and with the previous ones:

Swimming may make a valuable contribution to the health of many individuals because it is a sport which is widely available even in winter, it requires a minimum of equipment and it may be enjoyed by one person without a gathering of a team or group; because it requires the rather vigorous use of large muscles and many muscles; because it gives decided exercise to the important abdominal muscles; because certain strokes, particularly the breast stroke, probably tend toward improved carriage of head and shoulders; and because swimming is fun.

Swimming then is of value in strengthening muscles symmetrically, in improving posture, in stimulating organic vigor and in contributing toward mental health because of its recreational element especially when it is indulged in with a congenial group. Further, swimming may be done by many persons who are handicapped in a physical way. There have been a

number of excellent swimmers who have lost a leg and swimming is particularly recommended by many specialists for children who have had infantile paralysis. Many such persons are barred from sports involving running. 18

Of great importance is the fact that swimming is fun. If a person enjoys an activity, he is more apt to participate whole-heartedly. This participation will bring about a development of strength, endurance, and coordination through the necessary muscle activity. Swimming also provides an opportunity to compete with those on his own level or with himself as he can progress at his own rate. As his body develops, he can swim for longer periods of time and use increasingly difficult skills.

#### APPLICATION OF THE PSYCHOLOGICAL PRINCIPLES TO SWIMMING

We have said that, in swimming, a person can progress at his own rate. This includes a psychological readiness to progress from one skill to another as soon as he is mature enough to accept it, and as soon as he has had the necessary background for progression. There is no need for everyone in the class to stay on the same level; each one may develop individually.

An individual will have the desire to progress if he can understand the need for practice in the fundamental movements and what results will come from this practice. Swimming offers a golden opportunity in this aspect. As soon as a minimum of skills have been learned, the student may swim for recreation. It is the teacher's responsibility to know when practice in the fundamental movements has become drudgery and dif-

<sup>18</sup> Lipovetz, Ferd John, The Teaching and Coaching of Swimming, Diving, and Water Sports (Minneapolis, Burgess Publishing Company, 1949), p. 4.

ferent motivation is needed. Practice in the skills of an activity alone cannot satisfy, and recreational swimming meets an important need of the individual. Remember, we enjoy doing the activities that are fun to do and that we are able to do well.

Each phase, from learning basic skills to sufficient knowledge for livesaving should be a satisfying experience. Individuals are normally eager to learn if given a satisfactory stimulus in a correct learning situation. As Charles Bucher states:

In addition, personality is as important a factor in teaching water skills as in any other subject, for the instructor's ability to influence his learners by a pleasing manner, pleasant and clear voice, and good habits will stand in good stead. Patience is important too, for without it the student will lose confidence in himself and in the instructor's methods, and become disappointed and disillusioned. The teacher must remember also that many times students seem dull, not because of their inability to learn but because the teacher uses a faulty method. 19

### APPLICATION OF THE SOCIOLOGICAL PRINCIPLES TO SWIMMING

Swimming is not concerned just with teaching basic skills and providing physical activity. There are many sociological values to be gained by anyone who participates in this activity.

In order to contribute successfully to society, one must work and cooperate with others. Man cannot live independently of others. He must learn to give to the group if he expects to receive anything in return. Swimming offers various possibilities for the individual to cooperate, contribute, and learn to live with others. This is stated very well by

Bucher, Charles A., Methods and Materials in Physical Education and Recreation (St. Louis, C. V. Mosby Company, 1952), p. 37.

# F. J. Lipovetz:

Fortunately, swimming needs no such exclusive justification, for the whole activity is permeated by a recreative instinct which carries in its train an enthusiasm for achievement, an intensity of interest, and an emotional appeal which pay large dividends on the mental side in those attitudes and appreciations which lie at the very foundation of all worth while, enduring education.

On this, as a basis, should be built habits of persistence, of doing one's best, of competing with one's own self, without ethical limitation—and this in a sport where the danger of exhaustion is relatively small in proportion to the effort expended—habits of self subordination and cooperative endeavor, of courage and confidence and self control, which unlock hidden resources of power and release them as instruments of individual development increasing respect for personality, and enhancing capacity for service.<sup>20</sup>

The development of values which contribute to a worthy personality are found in some of the different areas of swimming. Group work is especially evident in synchronized swimming. Working with others, expressing ideas, accepting the opinions of others are all necessary in order to develop a composition for synchronized swimming.

Consideration of the rights of others, and a concern for their wellbeing, is put into daily use with the practice of safety standards to prevent injury and accidents. In connection with this, there is a service to be performed for others. A knowledge of water safety and life saving may give the individual an opportunity to help others in time of need.

In addition, swimming is an excellent carry-over activity. Once learned, swimming can be used throughout one's life. It is a wonderful recreational activity. It can be enjoyed with others throughout life. It is equally enjoyable for those who have little skill as well as for

<sup>20</sup> Op. Cit., p. 2.

those who are highly skilled. At any time it is an excellent outlet for the release of tensions which have been built up in the body.

#### CONCLUSION

We have now applied the philosophy of physical education to the area of swimming. We have shown that, through swimming, the Seven Cardinal Principles have been applied to the total individual. This includes the social and mental aspects as well as the physical aspect.

Swimming provides activity for more muscles, at a given time, than almost any other activity. This develops not only the muscles but also develops coordination between the muscles. With this coordination, the individual is better able to control his movements, and a feeling of poise and well-being results. With the development of this poise, the individual gains self-confidence in knowing that his body is capable of doing the activity.

Swimming can also provide an opportunity for creativeness. Although the strokes are standardized, the individual can express his ideas and emotions in "free" swimming and in compositions for synchronized swimming.

As the individual develops his skill, he becomes more and more conscious of the rights of others. If he has been properly taught, he will respect these rights. The final decision must come from within the individual. A knowledge of water safety is not enough. This knowledge must be put into use. Knowing your limitations, and not exceeding them to the danger point, is one way of respecting your rights and the rights of others. Usually when the capabilities of the individual are exceeded.

he endangers both himself and others.

By the use of these, and other, principles, swimming can help to develop a well integrated individual in all the aspects of physical education—physical, social, emotional, cultural, and spiritual. He will have gained valuable experiences which will enable him to cope with life's problems and to make worthwhile contributions to society. Thus we see that, if properly taught, swimming can make a valuable contribution to the field of physical education, and ultimately, to the education of the individual.

To conclude, we offer the following statement by John Torney on the values of swimming:

In planning the swimming program, consideration should be given first to the reasons for offering the program. Expression and emphasis vary with the individual situation, of course, but usually the reasons are expressed in terms of the needs to be met, or the benefits to be derived. The most widely recognized ones are commonly grouped under the following seven classifications:

Physiological. Swimming contributes to the development of most vital processes—digestion, respiration, circulation, and similar functions. Symmetrical development, the acquisition of grace and strength, the improvement of posture through the strengthening of muscles that are fundamental to it, and the increase of endurance are additional benefits to be obtained.

Recreational. The activity is pleasurable, and laughter and joy are characteristic of swimming participation. It offers recreation in which girls and boys can be active together; in fact, people of all ages and degrees of proficiency can find enjoyment in it.

Safety. The safety values of swimming are of extreme importance. In all water activities, the ability to swim gives insurance against possible mishap or tragedy.

Social. The devotion of a portion of one's time to self-training for service to others will always be a laudable social action; particularly will such preparation be commendable when it makes possible the saving of another's life. The greatest social benefit of swimming, however, is the splendid opportunity it can offer for boys and girls, men and women, to participate together in healthy and natural recreational

activity. Further benefit is to be found in the manner in which swimming can unite the entire family in the same pleasurable pursuit, thus serving to bind the group together.

Educational. Organized swimming programs make significant educational contributions through the presentation of facts related to health and through the inculcation of desirable habits. Definite skills and specific information are taught. Desirable attitudes, appreciations, and response tendencies are made a part of the personality pattern.

Mental. By providing a means of release from tension, swimming benefits the nervous system and contributes to mental health. In addition, the skills are of sufficient complexity to stimulate activity of the mind.

Special. Swimming has a high rating in terms of suitability for those with physical defects. The blind, the spastic, the paralysis victim, the crippled, and the injured can find in swimming activities the outlet, the assistance, and the success which they may sorely need. Such special values are easily equal to any of the foregoing, for they mean so much to those who receive them.<sup>21</sup>

<sup>21</sup> Torney, John A., Swimming (New York, McGraw-Hill Book Company, Incorporated, 1950), pp. 12-13.

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