PRINCIPLES AND METHODS OF

ADAPTED PHYSICAL EDUCATION AND RECREATION

FOURTH EDITION

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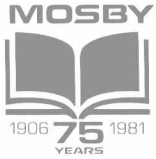

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To

our families

Preface

The fourth edition has been extensively revised to reflect changes required by Public Law 94-142, which defines the process by which education of the handicapped shall be conducted. This far-reaching legislation requires that school districts include in their programs Individual Education Programs and due process guarantees for handicapped persons. It is implied in this law that every teacher education agency should provide prospective teachers with experience in formulating individualized performance objectives based on assessment and in planning suitable programs that will enable handicapped persons to accomplish measurable objectives and goals. The number of individuals requiring special services for various disabling conditions is expanding at an ever-increasing rate. There is today a pressing need for programs and specialists that will aid handicapped individuals in developing their full potentials. Physical education and recreation can play an integral role in this development.

In the early 1970's the Bureau of Education of the Handicapped, part of the United States Office of Education, listed physical education and recreation as national educational priorities for the handicapped. This emphasis at the federal level has stimulated innovation in physical education programming for the handicapped. Educators are becoming more aware that each child can learn and develop at his or her own rate. Since each handicapped child is intrinsically different from other children, programming for individual handicapped persons based on their development and learning, in accord with their needs, should be emphasized.

This edition has retained descriptions of specific handicapping conditions and has included new sections on principles of normalization and the Individual Education Program. The book alerts the reader to educational processes that tend to view children as children, irrespective of their handicaps. Therefore, chapters have been updated to provide information for delivery of services for severely handicapped individuals. Materials contained within the text that are particularly applicable to the motor development of the severely handicapped are reflex maturation, conversion of perceptual prerequisites to instructional objectives, application of learning principles to instruction, and extensive normative data on preschool motor behaviors. Furthermore, chapters on handicapping conditions, relaxation, therapeutic exercise, musculoskeletal disorders, facilities, and equipment have undergone thorough revision. More than 60 new illustrations and numerous examples have been added to the book to clarify concepts presented.

This book is designed for the elementary and secondary school physical educator and the recreation specialist in adapted physical education. More specifically, it is intended as a text for colleges offering courses in adapted and corrective physical education and therapeutic recreation. The physical educator, recreational therapist, corrective therapist, school administrator, physician, school nurse, and physical therapist should all find the contents of this book pertinent to their particular fields.

Every effort has been made to show the reader both an academic and a practical approach to the field of adapted physical education. In all possible areas, theoretical material has been reinforced with information that is useful, practical, and feasible

and that applies directly to the teaching situation. The basic organization of this text is designed to describe the comprehensive aspects involved in the implementation of adapted physical education programs. There are four major divisions: The Scope, Key Teaching and Therapy Skills, Programming for Specific Problems, and Organization and Administration.

Part One provides the reader with an understanding of the diverse and complex nature of the handicapped individual. In this section, we have focused attention on the principles of normalization, the psychological implications of disability, the pertinent aspects of growth and development, and the perceptual implications for both nonhandicapped and handicapped persons. A chapter on the Individual Education Program directly relates these materials to meeting the individual needs of the handicapped person in our society.

Part Two is designed to provide an in-depth discussion of therapeutic exercise, tension reduction, low vitality and physical fitness, and adapted sports and games as they relate to all types of handicapped persons. Furthermore, prerequisite abilities that relate to motor skills and contribute to efficient task analysis are identified. These prerequisites of perceptual, physical, and motor tasks are essential to the development of programmed instruction for the Individual Education Program. Both individual and group approaches are presented to aid students and teachers in preparing to readily apply these techniques and materials to their respective learning and teaching situations.

Part Three supplies the reader with specific information about the most prevalent types of disabilities found in the elementary school, high school, and college groups and discusses the implications of these disabilities for the physical education program. Every attempt has been made to give timely and intensive coverage of these conditions and to discuss procedures for assessment and program planning.

Part Four includes information about the organization and administration of a district or school program, illustrates means of organizing adapted physical education classes for instruction in a variety of situations, and provides extensive coverage of facilities and equipment used in the adapted physical education and therapeutic recreation program.

Many hours and much hard work have gone into the creation of this edition. As is true of most productions of this type and magnitude, many individuals have assisted us. Therefore appreciation is accorded to those persons who have given their suggestions and comments on the first three editions, for their ideas have been incorporated into this edition. We wish to thank Dr. Dawn Chaney, Bennett College, Greensboro, N.C., for reviewing the manuscript and for providing many helpful comments. For their excellent photographic contributions, special thanks are extended to Dr. Julian Stein, Director of Programs for the Handicapped, AAHPERD; Dr. Tom Songster, Sports Director of Special Olympics; Carolyn Williams, Slippery Rock State College Swimming Program for the Handicapped; and the Special Education Early Childhood Intervention Program of the University of Kansas, Lawrence.

Dr. Jean Pyfer, Professor of Physical Education at the University of Kansas, is a contributing author to this edition. Dr. Pyfer has been an active professional in adapted physical education for many years. She has held several positions of leadership in the profession and has a wealth of background in direct services to handicapped persons. She is the recipient of several personnel preparation grants from the U.S. Office of Education, Bureau of Education for the Handicapped. Her services are sought for consultation and in-service training of implementation procedures of P.L. 94-142. Her professional work has cut across most disciplines that serve handicapped persons. Dr. Pyfer has been active in research in the area of perceptual-motor dysfunction for the more than 10 years and has received such awards as the Outstanding Educator in America Award for Educational Leadership by the Optometric Association. She has over fifty articles and invited presentations to her credit. Indeed, Dr. Pyfer is one of the outstanding professionals in the field of adapted physical education, and she has made invaluable contributions to this fourth edition.

Walter C. Crowe
David Auxter

PRINCIPLES AND METHODS OF

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Contents

PART ONE

The scope

Part One is prepared for the reader as an introduction to the diverse and complex nature of disability and, more specifically, to the role of physical education for the handicapped. We have focused the reader's attention on how the handicapped child is cared for in our society, on the psychosocial implications of the handicapped child's disability, and on pertinent aspects of growth and development that affect typical and atypical individuals. In keeping with recent federal legislation and a trend of increased importance in several states, information is included on implementation of the Individual Education Program.

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Serving the disabled individual

I introduce . . . a bill . . . to insure equal opportunities for the handicapped by prohibiting needless discrimination. . . . The time has come when we can no longer tolerate the invisibility of the handicapped in America. . . . I am calling for public attention to . . . facilities which are functionally inadequate and designed simply to isolate these persons from society. . . . These people have the right to live, to work to the best of their ability—to know the dignity which every human being is entitled. But too often we keep children who we regard as "different" or a "disturbing influence" out of our community activities altogether. These are people who can and must be helped to help themselves. That this is their constitutional right is clearly affirmed in a number of recent court decisions.[8] Senator Hubert Humphrey, chief sponsor of the Rehabilitation Act of 1973.

Physical educators are working in an era in which assumptions about the nature of handicapped persons are changing. Changing assumptions and changing facts about the handicapped give rise to new legal policies for conducting physical education for the handicapped. Judgments from the courts that have been converted into federal statutes give rise to new responsibilities to physical education and recreation personnel who conduct programs for handicapped individuals.

In enacting Section 504 of the Rehabilitation Act of 1973 (P.L. 93-112),[25] Congress has in effect codified the constitutional right to equal protection (Fourteenth Amendment) of the United States Constitution. As Broderick noted, Section 504 was originally introduced in 1971-1972 as a bill to include the handicapped in the Civil Rights Act of 1964.[13]

Section 504 was directed at the broad aspects of discriminatory practices. To fully implement Section 504 subsequent corollary legislation—the Education of All Handicapped Children Act of 1975 (P.L. 94-142)—was enacted.[27] In this legislation physical education was the only educational curriculum specifically referenced. Thus, physical edu-

cators have unique opportunities and responsibilities for serving handicapped children.

It is the purpose of this chapter to clarify the expectations of educational practices of adapted physical educators as compared to public policy formulated in the courts and incorporated in legislative statutes at federal and state levels.

The problem that physical education teachers of the handicapped must resolve is how to conduct instruction that conforms to the practices that have been laid down by federal statutes. Thus, in a transitional phase that involves changing instructional patterns in teaching, it is not uncommon for confusion to exist as to how to conduct physical education programs for the handicapped. A question that may exist for some time is what constitutes legal and ethical practice. To partially answer this critical question we have attempted to determine the meaning of Section 504 and of P.L. 94-142.

This is a time of great transition in the professional fields that deliver assistance to the mentally, physically, and emotionally inconvenienced. In our affluent society, no longer must the less fortunate person be relegated to living outside the mainstream of life.

HISTORICAL IMPLICATIONS

Early history

In the highly developed countries of the world, the present level of concern for the well-being of the individual has evolved gradually over a period of many thousands of years. One of the characteristics of the typical early primitive cultures was their preoccupation with survival. Historians speculate that members of many early primitive societies who were unable to contribute to their own care were either put to death, allowed to succumb to a hostile environment, or forced to suffer a low social status. In some societies, persons displaying

Fig. 1-1. Galen treating an ill child by cupping. (Courtesy Parke, Davis, & Co., Detroit.)

obvious behavioral deviations were considered—from a religious point of view—evil or, conversely, touched with divine powers.

These early inhabitants learned to fear the unknown and unexplained. Out of this anxious anticipation of danger or pain, they developed highly organized superstitions and religious expressions of the good and evil they saw in nature. The deviant individual, as the result, represented the unexplained and was often thought to be fraught with evil spirits.

Early sophisticated civilizations, such as China, Babylonia, and Egypt, depict in their writings the fear and superstition commonly associated with the atypical person. Even with the advent of modern science, the severely impaired or disabled were often regarded with disdain and suspicion, an attitude that is held by many persons in today's society.

The body perfection of the ancient Greeks and the rugged self-denial of the Spartans offered little, if any, place for the deformed or less endowed. Many deviant adults and children were made fools, jesters, and entertainers by the aristocrats of that period. Greek medicine, with the aid of Hippocrates (460-370 B.C.), made some inroads into changing man's reliance on supernaturalism by introjecting the logic of scientific reasoning. However, the chain of fear and superstition was not broken for long. After Greece's fall to the Roman Empire, its culture and scientific spirit degenerated. Even the brilliance of such persons as Claudius Galen (130-200 A.D.), a noted Greek physician, surgeon, and writer, could not impede the downward spiral (Fig. 1-1).

The medieval period brought with it self-denial for reasons of piety. As a result, the maimed, infirm, and mentally disturbed were often allowed to perish from a lack of care or become the recipients of cruel and inhuman treatment. Fear continued to cloud man's thoughts and found expression in the guise of religious doctrine. Any person different in behavior or appearance was thought to be a witch or possessed by the devil. Not until the late Renaissance period were man's primitive attitudes

Fig. 1-2. Pinel unchains the insane. (Courtesy Parke, Davis, & Co., Detroit.)

about the handicapped to be chipped away by scientific reason.

Humanitarianism and humanism

The Middle Ages gave way to the more positive period of the Renaissance, in which human dynamism again fulminated. Great social and cultural upheavals took place. The seed of social consciousness had been planted. A genuine concern for the individual developed, giving the individual dignity. With a desire for social reform came a multitude of movements to improve man's life. Reforms dealing with peace, prison conditions, poverty, temperance, and insanity were organized and many social and moral problems were attacked in the first decade of the nineteenth century (Fig. 1-2). However, the main impetus for aiding the disabled did not occur until early in the twentieth century and as late as the early 1960's for the mentally retarded and the emotionally disturbed. The contributions of such figures as President Franklin D. Roosevelt, supporting the fight against crippling diseases such as poliomyelitis, and the Kennedy family, working to help the mentally retarded, can hardly be overlooked when discussing this country's humanitarian concerns.

Humanism is concerned with the individual's knowledge, understanding, and full, unconditional acceptance of the self, without which there cannot be acceptance by others.

Influences of war

Surges of social change often just precede or follow in the wake of great national upheaval. Such was the case with the United States just before and just after the Civil War. The national climate during the period that preceded the Civil War was gradually changing from the coldness of Puritanism to a greater warmth and a beginning acceptance of man's imperfection. A social awareness at this time indicated an interest in making the world a better place for all to live. However, social welfare institutions could not keep pace with the enigma created by the industrial revolution and the human exploitation that accompanied it. Not until public legislation, which occurred later, would many of these problems be resolved.

By the twentieth century, the public's interest in the physically handicapped had heightened to the extent that legislative action was taken to alleviate some of the financial burden on individuals. The stimuli for action were the great number of permanently injured industrial workers, the influenza pandemic, the crippling infantile paralysis of 1916, and the multitude of maimed World War I veterans who returned from fighting overseas.

World War I is marked as a period that greatly advanced medical and surgical techniques designed to help ameliorate many physically disabling conditions. In addition, individuals were restored to usefulness by vocational and workshop programs. The interim between World War I and World War II was a time in which state and federal legislation was enacted to promote vocational rehabilitation for both the civilian and the military disabled. The Smith-Sears Act of 1918 and the National Civilian Vocational Rehabilitation Act of 1920 were the forerunners of the Social Security Act of 1935 and the Vocational Rehabilitation Act of 1943, which provided the handicapped both physical and vocational rehabilitation.

With World War II came thousands of ill and incapacitated service personnel. Means were employed to restore them to function as useful and productive members of society. Physical medicine became a new medical speciality. Many of the heretofore hospital services became autonomous ancillary medical fields. The paramedical specialties of physical therapy, occupational therapy, and corrective therapy considerably decreased the recovery time of many patients.

The present and future

How many handicapped persons currently reside in the United States? Until the 1970 census, this was a difficult question to answer. Reports indicate that there are over 11 million persons between the ages of 16 and 64 years who are not in institutions and are disabled and unable to work for 6 months or longer. In other words, 1 out of 11 Americans or 9% of its working force of 121 million were disabled by some chronically disabling condition. In general, the 1970 census revealed that those individuals who were handicapped and not in the mainstream of life earned less income had less education, were employed less often, and represented

more poverty than their working counterparts.[1,20] In contrast to the proportion of handicapped persons of working age, there are estimated to be over 7.5 million handicapped children in America, representing 12% of the school-aged population.

Many disabling conditions are becoming extinct, whereas others are coming to the forefront. Poliomyelitis is almost a disease of the past and the destructive effects of German measles are being controlled, but as society imposes new and different demands on humans other conditions emerge and become important. In recent years, more public and professional attention is being paid to mentally retarded, learning disabled, and multiply handicapped persons.

The court decisions and subsequent legislation of the early 1970's provide guidelines for mainstreaming handicapped children. Mainstreaming enables handicapped children to receive their education with their peers in regular classes. Such placement in an educational setting enables handicapped children to prepare for more normalized living.

Gilhool and Stutman point out that to determine the meaning of a legislative statute the starting point is "the plain language of the statute itself."[11] In addition, one must look to the historical context of the statute, previous related legislation, the overall legislative scheme, the evil the statute was designed to remedy, the spirit of the legislation, and its legislative history.

LEGISLATION

History

A quarter of a century ago, in the case of *Brown vs. the Board of Education,*[7] the Supreme Court expressed a theme that has recurred in P.L. 94-142, that of integration as a constitutional presumption of equal protection as applied to the segregation of children. The case addressed segregation by race. Subsequent court decisions addressed segregation on the basis of handicapping conditions. In the Brown case, which is not unrelated to the segregation of children because of handicap, the same parallel can be made for placement in the least restrictive environment.

In 1954, the Supreme Court, established the principle that all children must be guaranteed equal educational opportunity. The court presented the following statement:

> [Education] is required in the performance of our most basic responsibilities. . . . It is the very foundation of good citizenship. Today it is a principal in preparing him for later . . . training, and in helping him adjust normally to his environment. In these days, it is doubtful that any child may reasonably be expected to succeed in life if he is denied the opportunity of an education. Such an opportunity, where the state has undertaken to provide it, is a right which must be made available *to all on equal terms.*[7] (Italics added.)

In drafting P.L. 94-142 a similar relationship was observed between the effects of segregation by handicapping conditions and the effects of segregation by race. Therefore, Congress articulated a familiar theme from the Brown case, namely, that segregation is inherently unequal because it does not provide the segregated children with culturally relevant social learning experiences. In plain language, the Congress has required states to employ "procedures to assure that to the maximum extent appropriate handicapped children . . . are educated with children who are not handicapped. . . ."[27]

Integration of the handicapped

Although it is well recognized from a legal point of view that handicapped children are to be educated with nonhandicapped children (mainstreaming), there is confusion as to whether this is a trend that will continue. The educational measures that were promoted by the U.S. Office of Education in the 1960's and 1970's encouraged innovative ways to accommodate individual differences. These programs enriched educational programming for culturally disadvantaged, minority, and handicapped children. A wide array of different programs and strategies were introduced, which lead educators to believe that innovations were far from permanent.

Testimony from social scientists in the Brown case indicated that segregation of children deprived both groups of culturally relevant social learning experiences. Using this theme, Senator Stafford, the ranking minority member of the subcommittee for the handicapped, again expressed the educational values of integrating handicapped children

Fig. 1-3. Handicapped and nonhandicapped persons participating in a game of floor hockey. (Courtesy of Julian Stein, American Alliance for Health, Physical Education, Recreation, and Dance, and Courage Center, Minneapolis, Minn.)

with their nonhandicapped peers. Senator Stafford made the following points:

> For far too long handicapped children have been denied access to the regular school system because of an inability to climb the steps to the schoolhouse door, and not for any other reason. This has led to segregated classes for those children with physical handicaps. This is an isolation that is in many cases unnecessary. It is an isolation for the handicapped child and for the "normal" child as well. The sooner we are able to bring the two together, the more likely that the attitudes of each toward one another will change for the better.
>
> I firmly believe that if we are to teach all of our children to love and understand each other, we must give them every opportunity to see what "different" children are like.
>
> If we allow and, indeed, encourage handicapped children and nonhandicapped children to be educated together as early as possible, their attitudes toward each other in later life will not be such obstacles to overcome. A child who goes to school every day with another child who is confined to a wheelchair will understand far better in later life the limitations and abilities of such an individual when he or she is asked to work with, or is in a position to hire, such an individual.[24a]

The subject of integration of handicapped children is a critical portion of P.L. 94-142 because integration prepares handicapped children and nonhandicapped children for life in a world that includes handicapped people. It is not consistent with the Congress's intentions to maintain segregated, handicapped-only special education centers or schooling in such institutions.

Consider the following statement of Gilhool and Stutman: "Under the statutes any degree of segregation can be maintained only if it is necessary to the appropriate education of a child. There is no cognizable reason under the statutes—that is, no learning reason and no disability reason—for handicapped-only centers, certainly not on the scale they now exist."[11] There are few if any legitimate teaching strategies that require the complete isolation of a child from interaction with other children, and the few such strategies that do exist apply to a very limited number of children for very short periods.

Brown et al.[6] address the learning reasons for schooling severely handicapped children with nonhandicapped children. For the most part, these reasons are similar to those of Congress for enacting the integration concept. Brown et al. maintain the following position:

> Long-term, heterogeneous interactions between severely handicapped and nonhandicapped students facilitate the development of the skills, attitudes, and values that will prepare both groups to be sharing, participating, contributing members of complex, postschool communities. Stated another way, separate education is not equal education.
>
> Segregated service delivery models have at least the following disadvantages:
>
> 1. Exposure to nonhandicapped student models is absent or minimal;
> 2. Severely handicapped students tend to learn "handicapped" skills, attitudes, and values;
> 3. Teachers tend to strive for the resolution of handicapping problems at the expense of developing functional community referenced skills;
> 4. Most comparisons between students are made in relation to degrees of handicap rather than to criteria of nonhandicapped performance;
> 5. Lack of exposure to severely handicapped students limits the probability that the skills, attitudes, and values of nonhandicapped students will become more constructive, tolerant, and appropriate.
>
> Certainly, it is possible that interaction may not take place even if severely handicapped students are in the physical presence of nonhandicapped students. However, unless severely handicapped and nonhandicapped stu-